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ATLANTIC FISHERMAN

JULY, 1947

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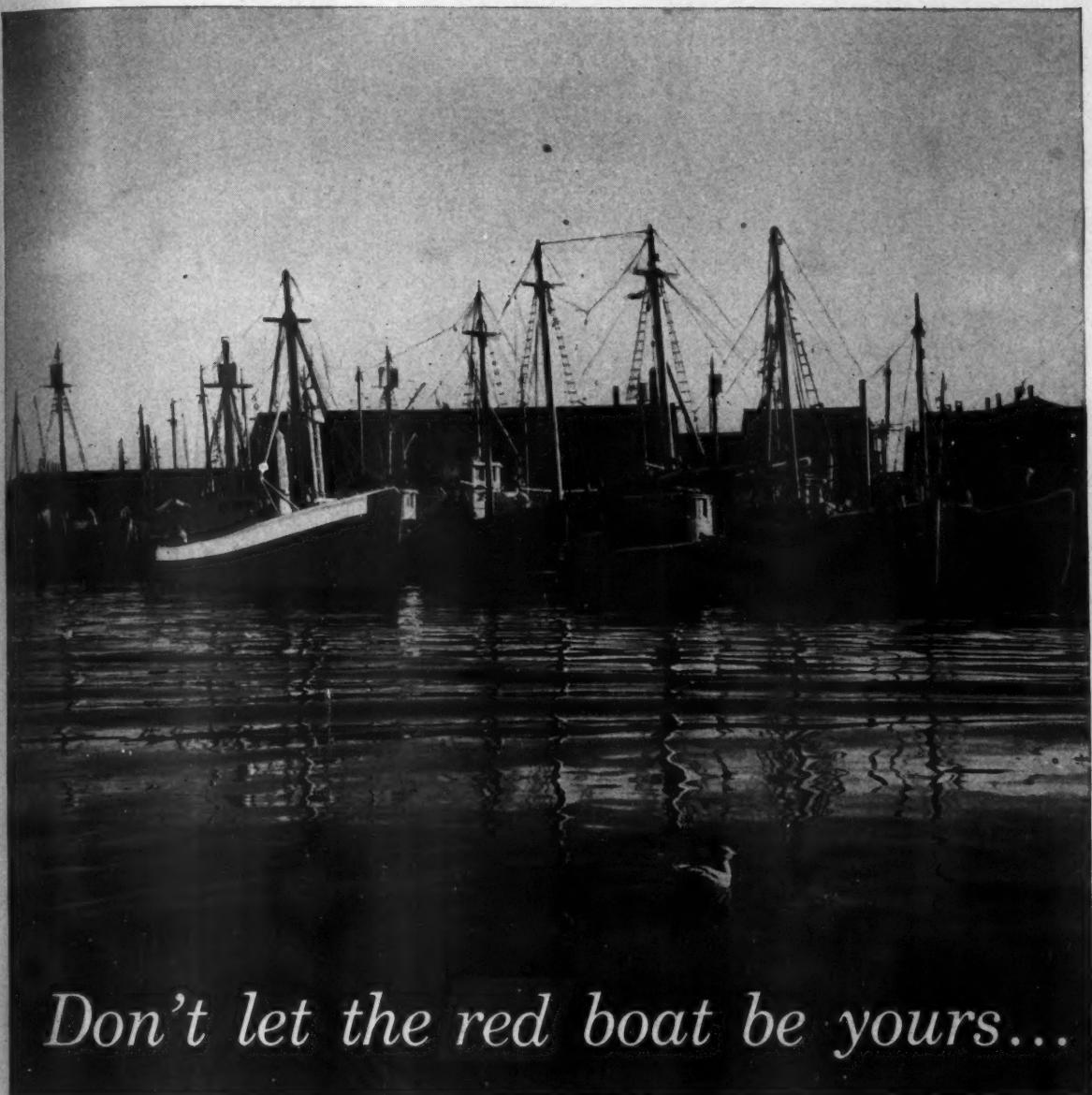
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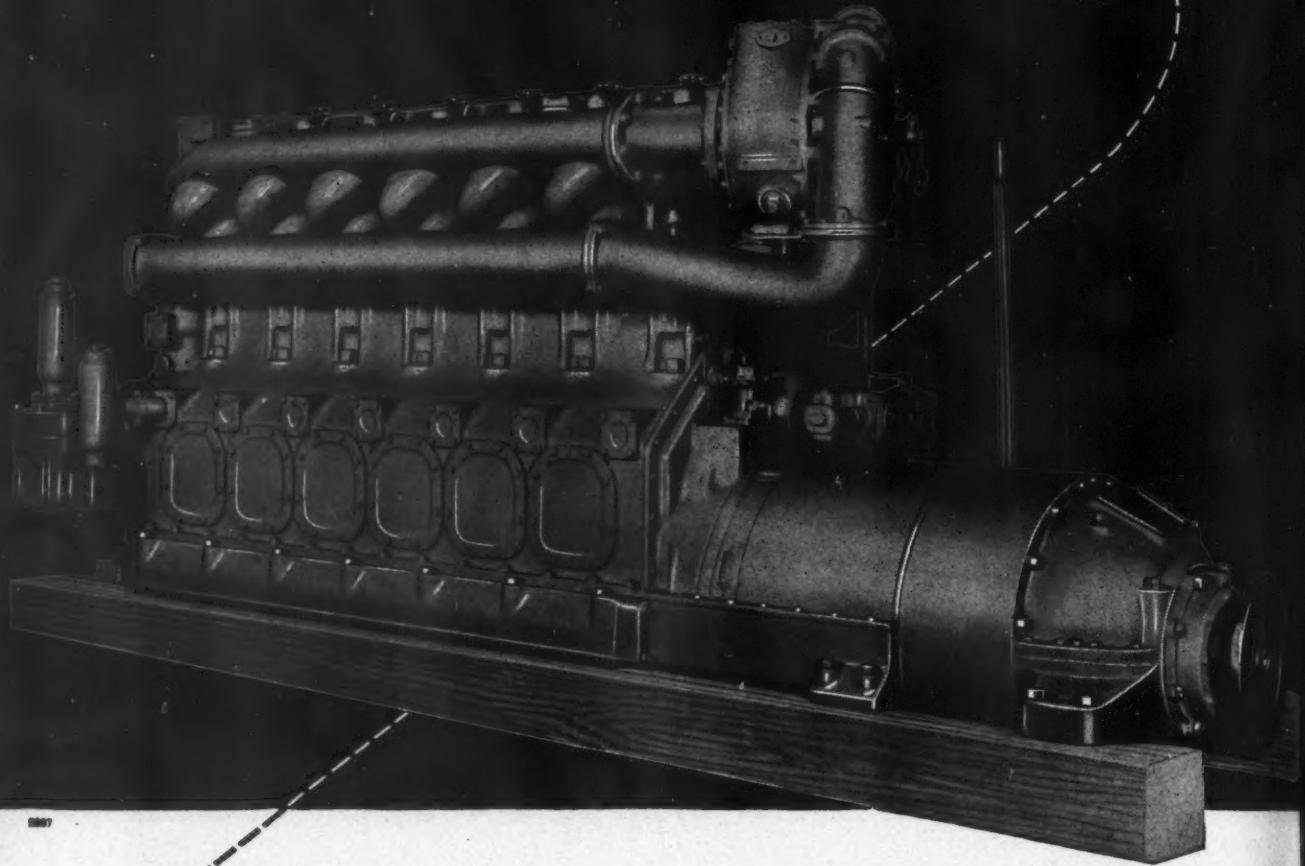
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Covering the Production of Fish and Shellfish on the Atlantic Coast, Gulf of Mexico and Great Lakes

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JULY 1947

NO. 6

Exploiting Distant Grounds By Processing On Board

A definite trend toward the performance of processing functions aboard ship seems to be indicated by recent developments in our domestic fisheries. On the Pacific Coast, floating fish and shellfish canneries, fish freezers, and reduction plants have operated for some time. California tuna clippers have long chilled or frozen their catches taken off Latin America. Many vessels carry refrigeration equipment to assist in preserving their fares. Shrimp have been processed and frozen aboard ship in the Gulf of Mexico. Several small Pacific Coast trawlers have tried filleting, packaging, and freezing, and three larger vessels have been recently fitted out for similar operations on a wider range.

Pioneers in this field are now carrying fish packing to distant grounds. The *Pacific Explorer*, a 410 ft. vessel, departed in January for Southern waters to explore the possibilities of a factory ship operating at great distances from processing plants and home markets. This ship will work in the tuna fishery off Central and South America during the Winter months, and will can or freeze crabs in the Bering Sea during the Summer. She acts as a mother ship to a fleet of 12 or more fishing vessels.

The *Deep Sea*, a 140 ft. steel vessel of East Coast trawler style, described elsewhere in this issue, plans to operate off Alaska on a year round basis catching and packing crabs and fish. The *Bering Sea*, a smaller vessel, conducted experimental operations in the Bering Sea last year and is now fishing off the coast of Chile.

The 108 ft. steel factory ship *Arcturus* of New Orleans, described in our June issue, is equipped to freeze and pack shrimp on the grounds, both from its own catch and that of other boats.

In many of the world's fisheries, vessels equipped to prepare finished fishery products at sea have been used to exploit distant fishing grounds. Before the war, Japan and Germany used factory vessels to catch and process fish. Foreign vessels equipped to freeze their catches have fished the Western North Atlantic. A large French trawler equipped with freezing and refrigerating equipment visited New England about 13 years ago. An Italian trawler with similar facilities fished the Grand Banks in 1940. Ten trawlers operated from France on the Grand Banks last year. Reports emanating from St. Pierre indicate that trawlers fishing from France will use St. Pierre as a base for their activities this season. Twenty-eight ships are under construction at the present time and will probably be in operation before the end of the current fishing season. Part of the catch of these trawlers from France will be landed at St. Pierre to be shipped to France in the autumn.

Factory vessels equipped for canning, filleting, freezing, and waste reduction are a means of eliminating the disadvantages of distance and time, and bringing even the remotest fishing banks closer to the markets.

On the Atlantic Coast, fishing activities have in general been confined to relatively nearby areas within a practical cruising

range, and reliance on ice for preservation of the catch has tended to restrict this range.

By having vessels fitted with facilities for processing, freezing and packing, the North Atlantic industry would be able to operate on more distant grounds, and still deliver prime quality products. With suitable waste rendering equipment aboard, the boats also could fully utilize fishery by-products, as well as trash fish, thus providing an additional source of revenue.

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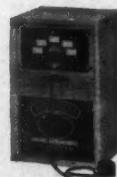
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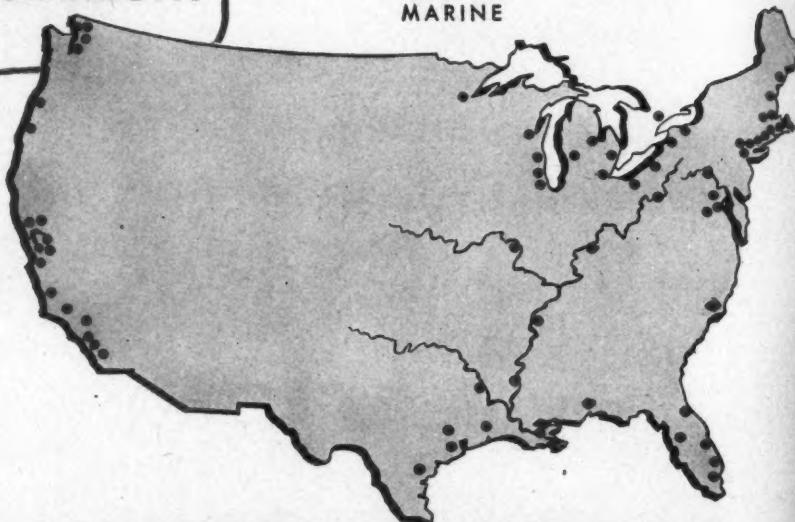


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At the left is a close-up view of the 6-cylinder BUDA Model 6-DCMR-1879 Diesel Marine Engine, the type used for single screw power on each of the twin shrimp trawlers "McClain's Pride No. 1 and No. 2." 2 to 1 reverse and reduction gears are used to swing 46" x 34" wheels.



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The Sounding-Lead

APPROPRIATIONS BILL—The Interior Department appropriations bill passed the Senate on June 16, and has gone to conference between representatives of House and Senate. The Senate voted an increase of \$170,740 over the House appropriation, including \$280,700 for commercial fisheries, as compared to the House appropriation of \$200,000 and the Presidential request of \$401,000; \$125,000 for the Market News Service, against the House appropriation of \$100,000 and the Presidential request of \$141,000; \$790,040 for Fishery Biology, against the House appropriation of \$725,000 and the Presidential request of \$902,000.

Under the total appropriation allowed, the Division is expected to operate the Beaufort, N. C. and Pensacola, Fla. laboratories and to put into operation the fishery research vessel *Albatross III*. The Senate committee deleted the language in the House bill making the expenditure of \$20,000 for the control of lamprey eels in the Great Lakes mandatory.

As a result of the decrease in appropriations, the Commercial Fisheries Division will have to lessen the vital work of collecting data on fisheries production, officials say. Under the \$200,000 House appropriation, collection of data from New York to Brownsville, Texas, and along most of the Pacific Coast would have to be eliminated. However, under the \$280,700 appropriation provided by the Senate, collection of figures in New Jersey, Virginia and Maryland could be restored. The Hampton, Va. and Jacksonville, Fla. Market News Offices already have been closed, and the New Orleans, La. Market News Office has suspended issuance of daily reports until it has definitely been learned that Congress has appropriated sufficient funds for the continuation of all the office's activities. Laboratories at Boston and in Puerto Rico may be closed.

LABOR BILL—According to Dr. Richard A. Kahn, economist of the Fish and Wildlife Service, the Taft-Hartley Labor Bill will affect 16,000 fishermen and 20,000 shore workers, and probably will result in fishermen being less willing to join unions and more ready to join cooperatives.

Dr. Kahn pointed out the following provisions as noteworthy: foremen in canneries and processing plants no longer can be members of a union; "stand-by pay" for services not rendered during the time that a ship is in harbor will not be permitted in the future; welfare funds, as established, for example, in Boston, will be administered with the cooperation of management, or the U. S. District Court will have to appoint an impartial administrator; and guards and policemen in fish processing plants no longer can be members of the fishermen's union, but will have to join their own union.

Besides these specific points, the general provisions of the labor bill will be applicable, of which the most important is said to be the prohibition of extra-contractual strikes and the right of management to sue for damages if this prohibition is violated.

UNEMPLOYMENT TAX BILL—Congressman Reed of the Ways and Means

Committee has stated that hearings on amendments to the Social Security Act, including Congressman Gifford's bill to again exempt fishing boats from unemployment tax provisions, will not be heard until Congress reconvenes after the first of the year. In view of efforts being made to extend the coverage of the unemployment compensation program, much explanation probably will be necessary to convince Congress that the law should not be applied to fishermen.

The House Ways and Means Committee, not understanding the situation, has asked the Fish and Wildlife Service to make a report on it. In 1947 the tax will apply to 3,251 vessels of ten net tons and more, to 38,134 fishermen, and a taxable payroll of \$110,575,000. The tax is estimated at \$2,947,190.

LONG-TERM MORTGAGES—Demands from the industry for some means of obtaining long-term mortgages on fishing vessels have led the Fish & Wildlife Service to have Dr. Richard Kahn, head of

the Economics and Cooperative Marketing Section of Commercial Fisheries, ascertain the possibilities of Government-backed mortgages. Under the Ship Mortgage Insurance Act, the Maritime Commission can insure mortgages on merchant marine and fisheries vessels for 20 years. But this act covers only newly constructed ships, and makes no provision for the needs of operators whose ships, old or newly acquired, have been in use for years. Commercial banks cannot give mortgages for longer periods than four years. One solution of this problem is said to be the formation of a Government-backed ship mortgage corporation which could issue mortgage bonds for ten or fifteen years, as is the practice used in some foreign countries.

TIDELANDS BILL—Following a recent Supreme Court ruling which held that the Federal Government has paramount rights to submerged coastal lands, Rep. F. Edward Hebert announced that he would seek an early hearing on his bill to place the title of these lands with the various States. The Supreme Court suit was started some time ago by Harold Ickes, who was then Secretary of the Interior. In the meantime, Congress passed a bill "quieting" the right of the Federal Government to the lands. However, the President vetoed the bill, stating that he would await the Supreme Court decision.

EXPORT POSSIBILITIES—The Fish & Wildlife Service has prepared an analysis of export possibilities for the fishing industry, which shows that exports could be increased substantially if the industry would act cooperatively. The best way for any line of industry to export is said to be to comply with provisions of the Export Trade Act (Webb-Pomerene law), which permits cooperative action by two or more American exporting companies or corporations, exempting such groups and also associations from possible prosecution under anti-trust laws for cooperative action regarding prices and selling practices. A fishery export association could serve the industry in foreign markets by introducing samples, arranging sales contracts, allocating orders, etc. The only export group in the industry now is the Maine Sardine Packers Export Association.

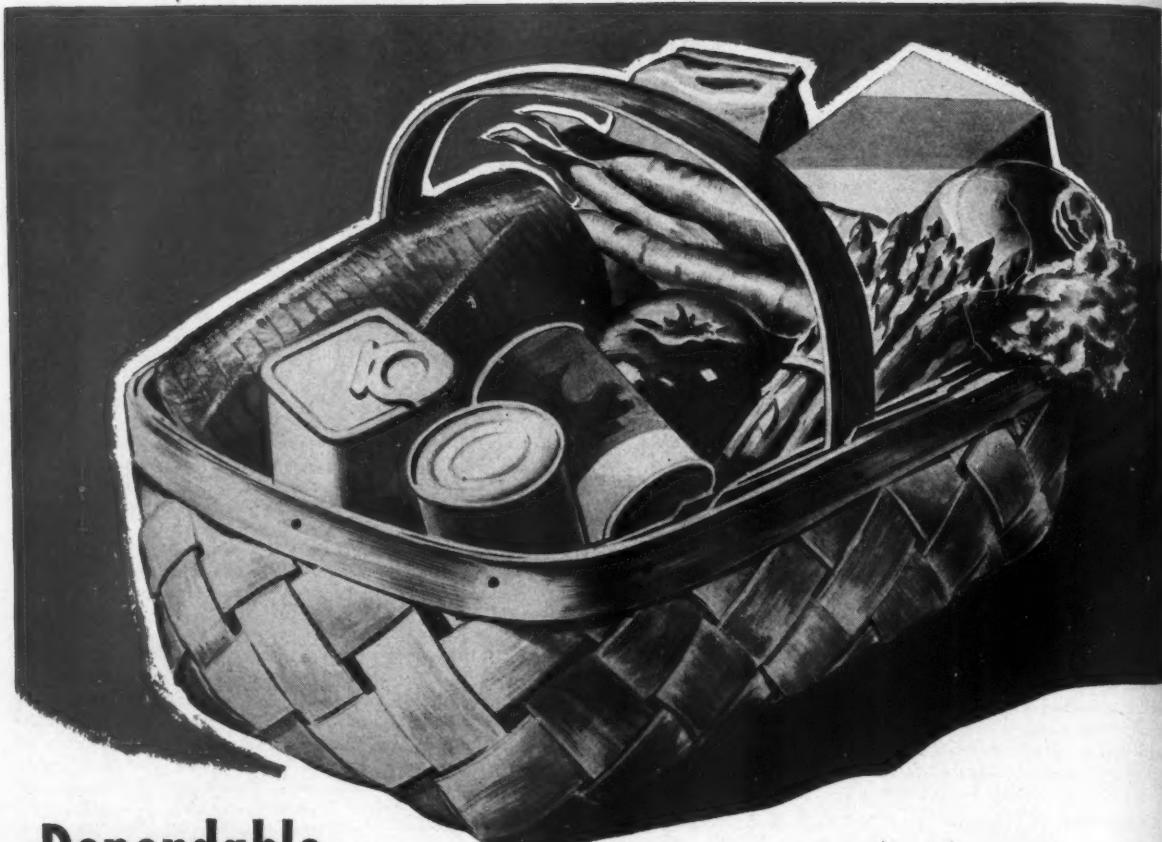
RELIEF BUYING—Congress has appropriated \$350,000,000 for foreign relief in the next fiscal year, with a portion of this amount to be spent for the purchase of fish which has been designated as one of the principal relief items. Acting on the request of the State Department, the RFC already has made available \$75,000,000 for purchases, mainly of foods. Varieties of canned fish which probably will go overseas include low-priced items like herring, California sardines and possibly mackerel and silver hake.

Support for domestic food prices, including fish, also will come from buying done by the UN's Children's Emergency Fund. The United States is giving \$15,000,000 for this relief purchasing, and later will provide \$25,000,000 more.

IMPORT SITUATION—Fisheries imports, which so far this year have been only about half those of last year, are no longer a threat to the domestic industry, in the opinion of some authorities. While there was much emphasis on fisheries tariffs in considering reciprocal trade agreements, reports indicate that now some of the foreign countries which would benefit from a reduction of fisheries tariffs are cool to proposals of the State Department, as they do not want to commit themselves to import United States products which they are asked to accept as reciprocity for increased exports of fish to this country. Also, the plentiful supply of domestic fishery products has drastically lessened the demand of dealers for foreign products.

The Bureau of Customs recently announced that the tariff-rate quota of 15,000,000 lbs. of fresh or frozen cod, haddock, hake, pollock, cusk and rosefish, entitled to entry for consumption at the rate of 1/8c per pound during the calendar year 1947, has

(Continued on page 49)



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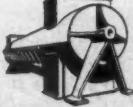
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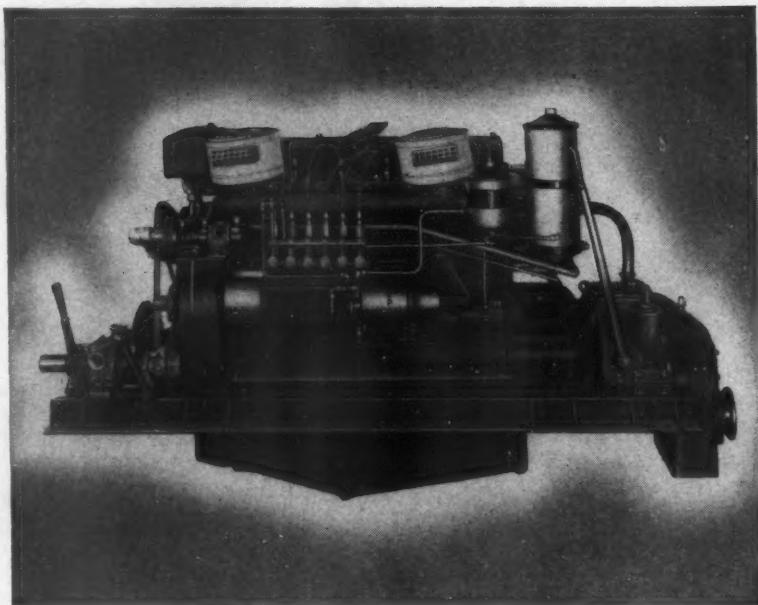
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*Using 8 1/4 gal. fuel oil.

Diesel Engine Design and Operation

By Wm. H. Radcliffe

WHILE Diesel marine engines in fishing vessels are not used in reverse or started and stopped too frequently, it is nevertheless a good idea for the engineer to know what takes place when an engine is put through these paces. This article will give him a general idea about the reversing and stopping procedures as well as a few hints on what to look for if things should not be running as smoothly as desired.

Stopping Procedure

Simply move the throttle lever to idling position and then release the load by moving the gear lever to neutral, trip the stop lever and when the throttle lever passes the "idle" position no injection takes place and the engine stops. Now close the valves in the fuel lines. There are certain precautions that should be taken when the engine is stopped and the boat is expected to be at rest for a time. One of the most important precautions in cold weather is to prevent the fresh water system from freezing if the engine room temperature is liable to drop below 32 degrees F. This can be done by adding some anti-freeze solution and then running the engine a few minutes to ensure thorough mixing.

After laying up each day it is advisable to pump up the air tanks to their full pressure by means of the compressor on the engine. The popping of the safety valves will indicate when full pressure is reached, after which the shutoff valves should be closed and the air compressor cut out by holding down the suction valve by means of the handle provided on the compressor cylinder head. To prevent the cylinder valve stems from sticking it is well to squirt a mixture of cylinder oil and kerosene on them once a day.

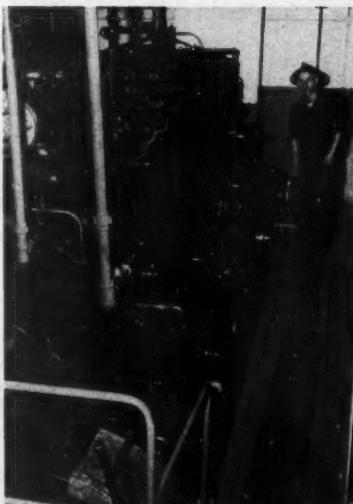
Reversing the Engine

Reversing gears on Diesel engines may be hand moved, have a hand control, or the forward and back movements may be made by electric motor or compressed air. To reverse the boat direction, pull the reverse lever back until it snaps into a locked position, but always reduce the engine speed when reversing and bring the engine to a full stop before putting the reverse gear in opposite running operation; otherwise, the boat may continue running in one direction.

It is easy to bring a Diesel engine to a stop because it is still compressing air in the cylinders when the fuel is cut off, and this produces a back pressure that aids the engine in coming to rest, so reversal takes but a few seconds. Not all Diesels are reversible. Those in the smaller sizes of 100 horse-power or less are usually not reversible. Some have propeller blades that can be reversed. In these the forward clutch connects the engine direct with the propeller shaft without intermediate gearing and the reverse clutch connects the engine shaft through a gear that changes the direction of rotation of the propeller and usually reduces its speed.

In a reversible Diesel engine the gear ratio is the same in either forward or reverse, so that the engine has as much power in reverse as in forward gear. The gear is also designed for sustained periods of operation in either direction or rotation.

The first movement of the handle or wheel operating the reversing gear lifts the valve levers off the cams, moves the cam shaft endwise and replaces the levers on the cams for reverse. The second movement of the handle or wheel to the "start" position admits starting air to the cylinders and starts the engine. The third movement to the "running" position cuts off the starting air and admits fuel to the cylinders, operating the engine in reverse. These three movements are not individual operations but are done automatically by mechanism when the control handle is moved to the reverse position.



The 300 hp. Atlas Imperial Diesel in the 92' Gloucester dragger "St. Peter II", skippered by Capt. Benjamin Favazza.

It is important that the reverse gear be kept in correct adjustment at all times because an improperly adjusted clutch will slip, causing rapid wear, cutting and possibly warping the friction discs. An over-tightened reverse band will drag, causing loss of power and damage to the drum surface.

On a new engine the reverse gear should be readjusted after the first few hours of operation, and at periodic intervals thereafter to compensate for natural wear on clutch plates and brake band, as these parts are subject to the same kind of wear from dirty oil or improper lubrication as the other parts of the engine. In checking the adjustment, make certain that the engine is in correct alignment with the propeller shaft. This is important because malalignment will throw an abnormal load onto the tail shaft and reverse gear bearings.

The lining on the reverse band is replaceable and is attached to its metal shell by soft brass rivets, but as the lining material has long wearing qualities it usually lasts throughout the life of the engine in normal service. However, if replacement becomes necessary, it is simpler to replace the complete band.

How to Check Knocking

Owing to the high compression under which a Diesel engine operates and the popping of the valves under normal conditions, the characteristic sounds of the engine are sometimes mistaken for knocking or hammering. To distinguish the latter from the former, place a solid iron screwdriver or bar against the engine and the other end to your ear and listen to the engine sounds in this way at various positions.

If the sound is hard and metallic and seems to come from one or more cylinders, the knocking is probably due to the presence of fuel or lubricating oil in the air charge of the cylinders during the compression stroke, in which case the engine should be shut down at once to prevent serious damage due to excessive pressures causing the noise. Look for leaky injectors, leaking fuel connections in the cylinder head, or to crankcase dilution due to fuel leaks. To correct this trouble, drain and refill the crankcase with specified oil, clean out the air box and blower with compressed air, and see if the air box drains are open. Look for a leaky blower gasket or leaky blower oil seals or plugged up air box drains and tighten all fuel connections.

It is possible that the knocking noise and accompanying vibration may be due to one cylinder getting more fuel than another, owing to an unbalanced condition of the linkage to the control rack. Inspect the piston rings.

Piston and Rod Noises

The most usual piston noise is a slap, click or rattle, due to the piston rocking from side to side in the cylinder. This sound is most noticeable when the engine is accelerating or running at low speed under load. It may be located by introducing a spoonful of heavy engine oil into the suspected cylinder through the fuel injector hole, and with the ignition off cranking the engine by hand for several revolutions so the oil works down past the piston rings. Then replace the fuel injector and start the engine, noticing if the noise still persists.

Piston pin noises caused by too much clearance or a loose bushing in the connecting rod are sometimes troublesome. These noises are a distinct metallic double knock, particularly noticeable when the engine is idling.

Connecting rod noises are sometimes mistaken for piston pin noises but can usually be located by taking out one fuel injector at a time. They may be due to poorly aligned con-

(Continued on page 34)

Pacific Trawler Processes, Freezes and Packages on Board

"Deep Sea" was Designed and
Built to Exploit the Crab and
Fish Resources of Bering Sea

THE first American fishing vessel ever built to process and quick-freeze fish and crabs at sea now is completing her maiden voyage in the vast, unexploited Bering Sea. This ship is the 140' all welded, steel trawler *Deep Sea*, designed by Coolidge, Hart & Brinck of Seattle to American Bureau of Shipping Class A-1 fishing standards. She was built by Birchfield Boiler, Inc. of Tacoma, for Deep Sea Trawlers, Inc., Seattle.

Operation of the vessel entails catching, cleaning, steam-cooking, packing, freezing, packaging and storing Alaskan king crabs and various species of bottom fish. Her owners predict a catch of 200,000 lbs. on this trip, of which 95% will be king crabs and the remainder sole and lemon sole. Lowell Wakefield, son of Lee H. Wakefield, pioneer Alaskan salmon and herring packer, is president of Deep Sea Trawlers. The Company expects the *Deep Sea* to operate throughout the year, moving southward in cold weather, with round trips taking from six to eight weeks.

The design of the *Deep Sea*, in general, is that of a North Atlantic trawler and she is said to be the first vessel of this type ever built on the Pacific Coast. This construction was chosen for its proven seaworthiness and adaptability to the crab fishery. She has a beam of approximately 27' and a depth of 16' with a loaded draft of 12½'. Her cruising range is 4000 nautical miles and her loaded speed is 12 knots.

An item of deck gear which is of particular interest is the enclosed trawl winch. This piece of equipment was custom-built by a West Coast firm from their own designs, and is claimed to be one of the largest winches ever built as well as one of the most powerful. It has two trawl drums each capable of handling 600 fathoms of 1" cable and two cargo drums each designed for 30 fathoms of ¾" cable. A 100 hp. General Motors 6-71 Diesel powers the winch through a Twin Disc hydraulic torque converter. The engine is controlled from the winch by Ellinwood hydraulic controls and each drum is driven through a Twin Disc clutch.

Navigating equipment and aids include a Sperry Mark I, Model I loran unit. This is believed to be the first fishing vessel operating in the Bering Sea and North Pacific to use loran. The *Deep Sea* also carries an Intervox Model 7R radio direction finder; an Atlas steering compass; Sperry steering stand with mechanical rudder indicator, and remote steering stations on the flying bridge; a 1000 fathom Submarine Signal Co. Fathometer; and Ellinwood hydraulic remote main engine controls.

A 350 watt HT4 Hallicrafters radio transmitter using six frequencies, a Model SX28A receiver for the pilot house and a Model S22R receiver for the galley comprise the radio equipment. Other than that, the vessel has the innovation of an Intervox inter-communication system with master stations in the pilot house and the processing room and seven remote stations in the various compartments.

Due to the nature of her operations, the *Deep Sea* carries a larger crew than an Atlantic trawler. There are accommodations for 31 men in 11 separate staterooms. The quarters include one 4-man and two 3-man staterooms forward; four 4-man aft; one 2-man aft of the galley; and separate staterooms for the captain, mate and purser on the boat deck.

The vessel has three wash rooms with showers, heads and lavatories and in the fo'c'sle there is a laundry with an elec-

tric washing machine and drying facilities. Galley arrangements allow for 15 men at three separate tables and there is a 150 cu. ft. walk-in refrigerator, a large electric coffee urn, a dish-washing machine, a two-oven range, and separate dry stores and vegetable storage. All living spaces are ventilated and heated by preheated forced air and steam convector heaters.

The main engine is a 1230 hp. General Motors Model 12-278A "V" type Diesel employing a Falk 3:1 reverse and reduction gear with Airflex clutches. A 92 x 56 four bladed propeller turns on an 8" forged steel shaft. There are three generating sets composed of 6-71 General Motors Diesels with 60 kw., 220 volt, 3 phase AC General Electric generators. Fresh water is provided by an 80 gal-hr. Klien Schmidt vapor compression type distiller modified to electric power. The vessel carries a 500 lb. and a 350 lb. Danforth anchor, two 20' metal lifeboats handled by Wein davits, and two rubber lifeboats.

The king crab, a giant crustacean often measuring five feet in claw-to-claw diameter, is found in profusion in Alaskan waters. Its meat has a texture something like that of a perch, not quite as firm as a lobster nor as oily as other species of crab. The flavor has been described as sweet, and has been compared with hot abalone and lobster. The flesh pulls out of the shell easily and can be cut with the edge of a fork.

It was Lowell Wakefield who, with the cooperation of the U. S. Fish and Wildlife Service and other Government agencies, first explored the possibility of American enterprise tapping the rich resources of the Bering Sea. After studying the king crab's habits and areas of abundance, Wakefield and his associates conceived of the principle of a vessel with enough range to fish far out along the Alaska Peninsula, sturdy enough to fish in all weathers, and with facilities for processing and quick-freezing her catch immediately upon taking it aboard.

Their ideas were embodied in the *Deep Sea*. Actually a floating processing and storage plant, this sturdy trawler has adapted the space-saving principles developed in the submarine service. Her high-speed, high horsepower Diesel engine and auxiliaries, and her processing, refrigeration and storage plants are engineered for the compactness required.

The method of processing crabs aboard the *Deep Sea* is as follows: When the huge net comes aboard, day and night, the crabs are dumped in one of the checkers on the foredeck. As soon as the net is overside and fishing, sorting of the crabs commences. Through a system of sluiceways, scrap, female crabs, and refuse are carried overboard immediately.

The large, male king crabs are cleaned at once and the sections are thrown onto a sluiceway which carries the raw material from any one of the eight checkers to the steam-conveyor along the port side of the processing room. The raw material is boosted along the sluiceway by a steady jet from a small fire hose. From the sluiceway, the crab sections are picked up automatically by the stainless steel conveyor belt which is housed in a custom-built steam box of Monel metal facing over one inch oak. The belt speed, regulated by a variable speed governor, is set to give the crabs a 17 minute cook in the steam.

From the top of the conveyor the crabs enter a hopper and then travel by chute to a feed belt over the crab shaking-fish



filleting table. Men at seven stations along the table disjoint the crabs and shake the crab meat onto twin return belts. Shell from the crab shaking (or refuse from fish filleting when that is being done) travels aft under the supply belt, by means of a metal sluiceway, to a grinder which is set in the deck and which discharges overboard.

The shaken crab meat is carried across the aft end of the processing room, and through a fresh water conveyor washer. From this it is deposited on a Monel sorting table where pieces of shell and fat are removed. This clean, picked meat then is weighed and passed to packers who load the freezing trays.

The trays and the continuous automatic quick-freezing machine are the heart of the processing cycle. Both were invented by members of Deep Sea Trawlers. Each tray is of two parts, a lid and a tray, which are composed of three units roughly 38" long, 3½" wide, and 1½" deep, the three units being tied together with cross bars. The lid engages the tray tightly and is kept in place with four locking bars. This tray design means the crab meat and fish are frozen in molds; it permits freezing under pressure which results in the exclusion of air from the product and greatly reduces the chance of freezer burn or deterioration. The molds are multiples of the package size.

After the trays are loaded they are slid across to the topside opening of the freezer trunk which houses the quick-freezing unit. This machine was designed by Lowell Wakefield to meet peculiar shipboard conditions, and is of necessity compact. While it serves the function of freezing the crab meat, it also transfers it from the processing room on the main deck to the packaging room below.

When the trays first enter the trunk they pass through several feet of precooling blast air and then when near the critical temperature, enter the area of direct blast and coldest temperatures. Due to the high conductivity of the metals used, together with the tremendous volume of cold air, the crab meat is frozen very quickly. At the lower end of the trunk the trays are discharged automatically into the handling room. There they are defrosted hydrostatically and the long bars of frozen produce removed from the tray.

The trays then are washed automatically and disinfected while traveling up a hydraulically operated elevator back to the processing room. In the processing room the trays are stored in the packing table where they again are washed.

Meanwhile, in the packing room below decks the bars are cut into 7½" or 3¾" sections which give a 16 oz. fish package and



Fishermen display a giant king crab caught in Alaskan waters.

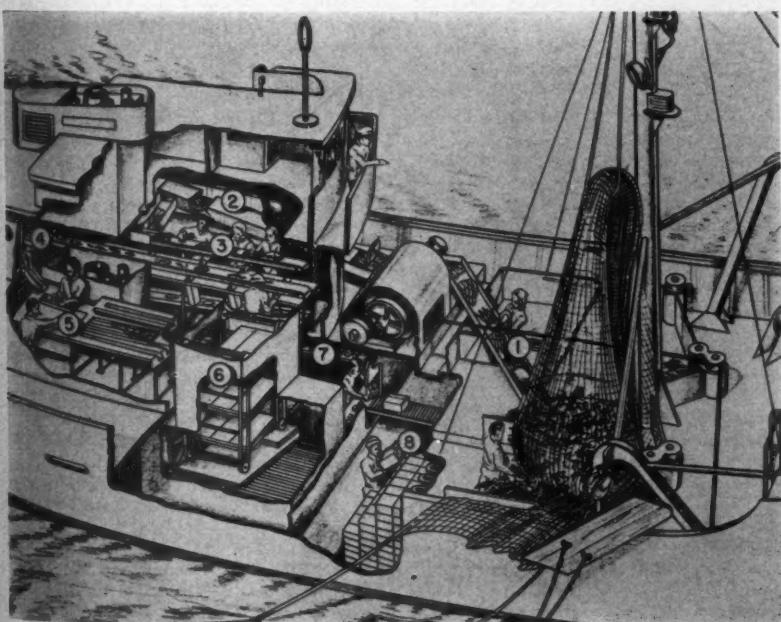
a 12 oz. crab package. These units then are given a double glazing in fresh water to guard against freezer burn. After glazing they are wrapped in aluminum foil and heat sealed, which results in a nearly perfect package. Placed in shipping cases they immediately are sent forward into one of the two zero storage holds which have a combined capacity of 8500 cu. ft. From these holds the finished product goes to the ultimate consumer, locked fresh in the package in which it was placed after coming out of the cold Bering Sea water.

Crabs in the shell pass over the same processing line with a few alterations. They are not cooked in the steam conveyor. The two sections of each crab are inspected and cleaned only on the shaking-filleting table. On the packing table four or more sections are weighed out, stacked end for end and then tightly rolled with waxed locker paper, the ends of which are rolled in and stapled.

These packages then are frozen and cased up in the ordinary manner.

Lemon sole, sole, flounder and other choice varieties found in large quantities in the Bering Sea, go through the process line in much the same manner as shaken crabs. The fish are washed in lieu of being cooked in the first conveyor. On the fillet table they are filleted and skinned, following which they pass through the fresh water conveyor washer, and are deposited on the Monel metal packing table. After careful inspection they are packed in the freezer trays and from there handled in the same manner as the crab meat. The one exception is that all fish fillets are put up in one pound aluminum foil packages.

In going into the Bering Sea, Wakefield's vessel is operating in waters which some consider to be the greatest unexploited grounds in the world. Circumstances are now ideal for commercial enterprises in this area. Not only has the research of Wakefield and the Government made available for the first time sufficient data about the resources of the region, but the former near-monopoly of Japanese crab fleets has been broken and the American Bering Sea has been reserved by Presidential proclamation to exploitation by the United States.



Production on the "Deep Sea" is depicted in the accompanying diagram. Processing proceeds as numbered: (1) crab sorting and cleaning (2) steam cooking, conveyor (3) shaking (and fillet) table (4) fresh water washer (5) inspection, weighing and packing in freezer trays (6) continuous quick freezer (7) aluminum foil packaging (8) refrigerated case storage.

Texas Rehabilitating Oyster Grounds

J. W. Baughman Discusses Problems In Restoring Reefs to Former Abundance*

OYSTERING in Texas has been carried on since before the white man first discovered the American continent. Four hundred and twenty-eight years ago Cabeza de Vaca, Texas' first white man, found the Indians of the Texas coast subsisting partially on oysters, and the abundant shell middens from Galveston to Corpus Christi attest the fact that this was a common practice. However, it was not until the latter part of the 19th century that oysters in Texas really came into their own.

To give some ideas of their former abundance I can do no better than to quote from the letter of an old-time oyster man, Mr. Louis Peden, of Galveston, who saw the industry at its height. "In 1890 or '92," he says, "the Givens Oyster Company operated an oyster cannery at Corpus Christi, and was a dominant factor in the area, both in the canning and shucking of oysters, which they sold by the thousands of gallons. The fleet of boats working for this Company hauled from Galveston, Matagorda, Port Lavaca, Rockport, Fulton and Corpus Christi, some of them carrying as much as 500 barrels at a time. Each day they brought in thousands of barrels and I recall that at one time the Givens Company imported several hundred shuckers from Baltimore."

"Most of the oysters came from 'Old Reef' just across the bay. This reef was a wonderful producer, both in quantity and quality.

Mechanical Exploitation

"It was here I saw my first oyster dredge in operation. In those days it was difficult to operate an oyster dredge from a sail boat and gas engines were unknown. However, someone brought a steam tug into the picture. This tug towed a big barge from which two dredges, each having a capacity of five barrels, were operated, one working while the other was dumped. About 30 Mexicans were employed on the barge, sorting the oysters, and they were kept busy as it only required about 5 minutes to fill one of the dredges. In only a little over a year 'Old Reef' was gone.

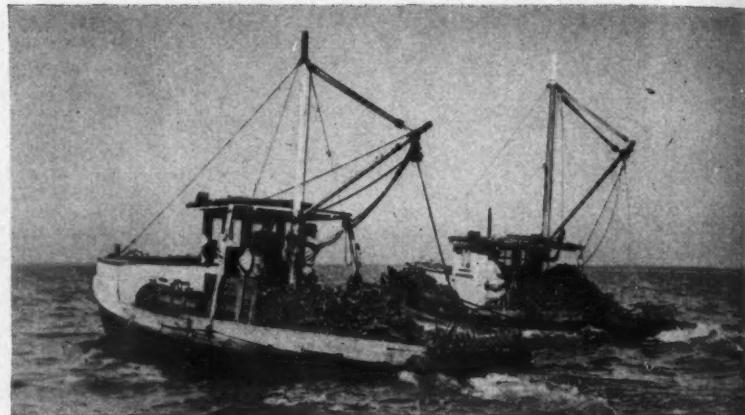
"In the Port Lavaca area a man could easily tong from 7 to 30 barrels a day, and, in one day, a crew of 3 men on the schooner *Leonora*, tonged 135 barrels. Oysters were so plentiful that dealers placed a limit on the barrels a boat could bring in for supply far outran the demand, and the difficulty was not to get the oysters, but to find some place where you could sell them. I have seen oysters sold for 15 cents a hundred, shucked.

"Oystermen were everywhere, and one day, on Half Moon Reef (off Port Lavaca) I counted 287 boats fishing that reef."

This was the heyday of Texas oyster, but even before that time some of the more foresighted oystermen had felt that this was the beginning of the end. The advent of power boats and dredges, the ruthless and uncontrolled stripping of the reefs, all combined, were too much for the oysters and, although production in 1904 reached a peak of 199,000 barrels, by 1908 the production had dropped to 102,000 barrels, and from that time on the production and quality of Texas oysters began a steady decline, reaching an all time low in 1943-44 of 36,981 barrels.

Other factors contributed to this also. In 1913 and 1914 much of the Texas coast was swept by freshets from both the Colorado and Brazos, killing off the oysters in Matagorda Bay.

A third cause for the decline, particularly in Galveston Bay, was the use of oyster shell to produce lime, cement, chicken feed, and magnesium. The result has been that, between the shell



Two dredges in Aransas Bay bringing in their loads of oysters. The shells are returned to the Bay after shucking.

dredges and increasing industrial pollution, there is hardly a producing bed in what was once one of the most fecund producing grounds in the State.

Here then are the causes of our decline, in the order of their importance: (1) Destruction of grounds by sedimentation and floods, affecting the Matagorda area. (2) Lack of management and uncontrolled exploitation, affecting the entire coast. (3) Destruction of live reefs by shell dredges, affecting Galveston, Corpus Christi, Aransas, Lavaca and Carrancahua Bays. (4) Industrial pollution, affecting Galveston, Nueces and Corpus Christi Bays.

A fifth cause, mortality from oyster pests, is negligible, as they are few on the Texas coast, with the exception of *Nematopsis*. Very heavy infestations of this crab parasite are present on portions of our coast, particularly in Copano Bay.

Our main problems, then, are rehabilitation of our reefs, and perpetuation of our oyster crop by wise regulation and management.

Present Program

It has not seemed desirable to attempt any extensive planting for several reasons. In the first place it is expensive, costing, if we plant seed oysters, at least \$150 per acre, and with huge areas of denuded reef and bottom needing reseeding this would run into many millions of dollars. Moreover, this would amount to an outright subsidy of the oystermen, who can take oysters from these grounds just as they can from natural reefs, without making any return to the State.

A second reason was the impossibility of patrolling such planting thoroughly, except in limited areas, and the consequent lack of assurance that the seed would be allowed to attain maturity.

Consequently it was thought best to undertake the study of this problem by making a number of experimental plantings with a view to discovering the best type of bottom in the area for such replanting, always bearing in mind that because of our Texas law it was not possible for the oyster farmer to lease the most suitable area, i.e., a natural reef, even though denuded.

Secondly we wished to discover the most desirable density of planting for the area and, thirdly, what type of seed can be used most advantageously.

This work at present is being carried on in two areas, Aransas Bay at Rockport, and South Bay at Port Isabel, but the Port Isabel work is of little interest except to determine the rate of growth of oysters in the very high salinity of that portion of our coast. The use of Aransas Bay close to Rockport was the result of two very practical considerations. The first was that we can see all our experimental plantings from the laboratory

(Continued on page 51)

* Mr. Baughman is chief marine biologist of the Texas Game, Fish and Oyster Commission and head of the Commission's Rockport Marine Laboratory. He has devoted years of study to oysters, and organized the first cooperative oyster farming project in Texas, with oystermen at Rockport.

Review of Recent Fisheries Law Suits

By Leo T. Parker, Attorney at Law

THE following outstanding decisions rendered by the higher courts in legal controversies affecting various segments of the fishing industry are presented for the purpose of keeping the industry informed and to offer its members a means of protecting themselves against becoming involved in similar suits.

Misleading Label

According to a recent higher court any misleading label is illegal. For example, in *Perloff v. Federal Trade Commission*, 150 Fed. (2d) 757, it was shown that a company has been engaged in the wholesale business of canned foods in commerce since 1922. They do not own or operate any canneries. Their practice on canned foods is to purchase such products from canners. Labels for the goods are furnished the canners who affix them to the containers. On some of those labels, the Company uses the name "Atlantic Packing Company, Distributors".

The Commission held this name to be erroneous and misleading as applied to those items which the Company does not pack, as the word "Packing" in the name constitutes a representation that such items are packed by the Company. The higher court approved the Commission, and said:

"As used, it can be reasonably implied that the particular goods so labeled have been packed by the Company."

Unemployment Compensation

Considerable discussion has arisen from time to time over the legal question: Under what circumstances will workers in a labor dispute be denied unemployment compensation?

Recently the Supreme Court of the United States held that where fishing and canning companies and workers customarily carried on negotiations at points distant from their plants and a union voluntarily entered into such negotiations without challenging propriety of the practice, the labor dispute was "at the factory, establishment, or other premises" within the Alaska Unemployment Compensation Law thus preventing payment of compensation to workers for first eight weeks of unemployment resulting from the labor dispute.

For example, in *Unemployment Compensation Commission of Territory of Alaska v. Aragan*, 67 S.Ct. 245, it was shown that three corporations are engaged principally in the business of salmon fishing, canning, and marketing. These corporations customarily hire workers at San Francisco at the beginning of the season, transport them to the Alaskan establishments, and return them to San Francisco at the season's end.

It has been the practice for some years for the union to enter into a written agreement with the companies. For the 1940 season serious disagreement appeared which quickly developed into an impasse on the question of wages. Although negotiations proceeded up to the deadlines, the parties arrived at no understanding in certain instances.

In subsequent litigation the Supreme Court held that the employees were not entitled to unemployment compensation for the first eight weeks of their unemployment. This court said:

"As a result of the dispute the normal activities involved in catching and canning salmon were not carried on throughout the 1940 season at any of those establishments. We do not consider significant the fact that the companies and the union did not negotiate at the canneries or on the ships in Alaskan waters . . . Obviously, for the purposes of 5(c) (2) (A), the term, 'labor dispute', has a broader meaning than that attributed to it by respondents (employees)."

Reasonable Use of Waters

All uses of waters, irrespective of location, must be reasonable in consideration of the legal rights of others. In *State v. Malmquist*, 40 Atl. (2d) 534, it was shown that a law authorized a property owner to erect a dam across an outlet for the purpose of supplying water to a mill standing on the stream.

In subsequent litigation the higher court held that if the owner of the dam impaired the common right of others fishing, or the fish diminished, a public nuisance is created and the

State may stop use of the dam. This is so although a valid law authorized the property owner to construct and use the dam. Of course, the same rule of law is applicable to other obstructions, as fish traps, and the like.

Oyster Damage Claim

According to a recent higher court insufficient bookkeeping records will not prevent a court from awarding reasonable damages to oyster beds.

For illustration, in *Seipp v. United States*, 68 F. Supp. 205, Seipp, the lessee of oyster beds sued the United States for damages done by dredging operations carried on by the Government in the Patuxent River in Maryland. The testimony showed that Seipp had a 20 year lease on 28 acres of the bed of the river for oyster culture. In 1942 and 1943 the Government dredged the river in two places in the general vicinity of the oyster bed.

Seipp lacked any regular system of records or bookkeeping which resulted in insufficient evidence as to the amount of his damage which would have been desirable. But the court reached conclusions which were reasonably satisfactory, in spite of these deficiencies in the evidence, and allowed Seipp \$4,987 damages. With proper bookkeeping records he may have recorded much greater damages. This court said:

"We are persuaded that the plaintiff's (Seipp) oysters were in part destroyed and in part damaged by the Government's dredging and mine testing operations . . . As to the amounts of oysters and shells lost by the plaintiff and their value, we think that the conclusions reached by the Commissioner of this court represent fair approximations."

Courts Will Not Interfere

According to a recent higher court the courts will not interfere with a State Commission's refusal to issue fishing licenses unless the testimony clearly shows that the Commission acted unreasonably and arbitrarily.

For illustration, in *Ferrante v. Fish & Game Commission of California*, 175 Pac. (2d) 222, it was shown that the Commission made a finding that 395,000 tons of pilchard sardines for the season 1946-1947 could be taken from the territorial water of California without adversely affecting the interest of the people. It fixed May 15, 1946, as the last day for receiving applications for permits. The testimony showed that 109 applicants filed applications for such permits prior to the date fixed. Out of this number the Commission refused to grant licenses to ten applicants who filed suit and asked the court to compel the Commission to grant their permits. The court upheld the authority of the Commission and said:

"The Legislature has entrusted the supervision and protection of this valuable resource of the State to the Commission, not to the courts. The Commission must be presumed to have a knowledge of the conditions which underlie and motivate its regulatory actions and unless it is demonstrated that those actions are not grounded upon any reasonable factual basis the courts should not interfere with the exercise of the discretion vested in it by the Legislature, nor lightly substitute their judgment for that of the Commission."

Possession Not Unlawful

In the course of wise protection of the natural resources of the States, the legislatures have enacted various laws, including laws governing the size of gill nets which may be used by licensed commercial fishermen for the taking of the various fish in the Great Lakes.

For illustration, in *Hoffmaster v. Thomas*, 25 N. W. (2d) 154, it was shown that in 1945 a State law was passed which made it illegal to possess nets of a certain mesh size. Certain nets possessed by a licensed commercial fisherman were seized prior to the effective date of when this law went into effect. The higher court ordered that the nets be returned to the fisherman, saying: "Obviously Thomas' (fisherman's) possession of such nets was permissible and not unlawful at the date of their seizure."

Clam Farming on the Maritime Coasts

J. C. Medcof Cites Experimental Work
And Outlines Cultivation Procedures*

DURING the last six or seven years an increased demand for clams, resulting partly from expansion of the shucking industry, led both to more extensive and more intensive digging. At first, production rose but very soon over-fishing brought about depletion of many beds and, consequently, a reduced production stifling the industry in some districts. It is desirable to restore production and maintain it at a high level. New England experience has shown the value of clam farming for this purpose. Experiments to develop and test clam farming methods under our own conditions have been conducted by the Fisheries Research Board. In Nova Scotia the provincial Department of Industry and Publicity has assisted.

Collecting the Seed

The principal step in clam farming is the transfer of small clams (seed) from areas where they are over-crowded, or for other reasons unlikely to mature properly, to good growing and maturing grounds.

Many harbors have extensive tide flats populated with small clams crowded to densities of 60, 80, 100 or more per square foot. Seed collection is attempted only in such places, which are often at high levels on the beach. In spite of their small size, a bushel of these clams can be dug by hand in about the same time as a bushel of large clams which seldom occur in such heavy concentrations. The most satisfactory seed are $1\frac{1}{4}$ to $1\frac{3}{4}$ " in length. Smaller clams are too fragile to handle. Larger ones do not establish themselves readily when transplanted. Seed must be carefully handled.

Methods of Planting

Between digging and planting, seed must be kept cool and moist. They may be stored in air out of the sun or left on the tide flat near or at low-water mark, where they will be covered by salt water during the greater part of the tidal cycle. They should not be exposed to fresh or brackish water, and never covered by stagnant water in tubs, puncheons, or dories. The use of shallow wooden containers prevents undue pressure on the bottom layers. The clams may be further protected by lining the containers with seaweed. Seed clams should be jostled as little as possible; hence trucking is undesirable if boat transport from the digging to the planting ground is available. Planting should be done as soon as possible, preferably the same day as digging, and never later than the third day after digging.

In some of the New England States seed clams are dropped like potatoes in furrows made with a hand plough. The furrows are placed 4 to 5" apart and clams dropped about 4 to the foot. The clams in each planted furrow are covered by soil when the next furrow is ploughed. While slow and costly, this method insures a high percentage burial and an even distribution of the stock. A quicker and cheaper method is broadcasting by hand onto the beach at low tide, or sometimes from a boat at flood

* This article comprises a report by Mr. Medcof which was released by the Atlantic Biological Station at St. Andrews, N. B.



Dana Wallace of Maine's Sea and Shore Fisheries Department, left, and John Rush spread seed clams on depleted areas in Stover's Cove, Me.

or high-slab tide. The clams scattered in this way dig themselves into the soil by their own efforts. Scuffing the surface of the flat with a hand cultivator before planting insures a higher percentage burial. One man scuffing usually can prepare the ground fast enough to keep three planters busy. A careful planter broadcasts about 8 to 10 bushels of seed per hour.

If planting is done by broadcasting it is important that the weather be reasonably calm and tidal currents slight; otherwise, the seed will "bunch" in depressions, or even be washed off the planting area altogether. Sometimes it is worth while postponing planting for several hours, or even a day, until satisfactory weather and water conditions are obtained. The clams should be scattered with care to avoid undue breakage and to assure an even distribution to a density of about 15 per square foot. For $1\frac{1}{2}$ inch seed about 200 bushels per acre is required. Normally three-quarters of the seed will have buried themselves ("caught") by the next low tide. Experience indicates that Spring is best for planting, but the operation need not be limited to this season.

Growth and Survival

In our outer coast areas the growing season lasts only from May to October, and growth is slight, about $\frac{1}{4}$ " per year. Thus, at least three years and more often four are required for seed clams to pass the minimum legal marketable length of $2\frac{1}{4}$ ". Less time is required in the Gulf of St. Lawrence.

Corresponding to this length increase there is about a four-fold increase in volume. At the $2\frac{1}{4}$ " size the volume of a clam almost doubles with a half-inch increase in length. Under favorable conditions for survival and growth, it is therefore worth while to allow clams to grow somewhat beyond the minimum marketable size before harvesting.

With experience, those interested in clams will find the growth lines on the shell useful in estimating ages and growth rates.

There is a substantial loss at planting. This results from breakage of clams or their failure to bury themselves. Under good conditions this loss is often as high as 25%. Following the planting there is an annual loss which ranges from 2 to 10%. In good areas it seems reasonable to expect a survival after 4 years of about 70% of the clams that "caught".

In some districts extensive and unpredictable "Winter-killing" occurs. This is not

(Continued on page 33)



Maine fishermen dig seed clams in Stover's Cove, Me. for restoration program.

Great Lakes Hatcheries May Be Re-established

The House Committee on Merchant Marine and Fisheries has reported favorably several bills which were introduced by the late Congressman Fred Bradley of Michigan and provide for the re-establishment of rearing ponds and fish hatcheries at Rogers City, St. Ignace, Charlevoix and on the Anna River in Alger County, Mich., at a cost of \$50,000 in each area. Members of the Committee believe that inasmuch as records indicate a constant decline in commercial fishing in Lakes Superior, Michigan and Huron, the Federal Government should reopen hatcheries and rearing ponds at the earliest possible date and determine from practical experience in the future whether the operation of such hatcheries and rearing ponds is beneficial to commercial fishermen.

In the Winter of 1945, a subcommittee headed by Congressman J. Hardin Peterson of Florida held hearings on the matter at Blaney Park and Bay City, Mich., at each of which approximately 150 commercial fishermen were present, and unanimously requested that hatcheries and rearing ponds be reopened. One fisherman who was present at the hearings, Clarence Mertz of Rogers City, produced records revealing an increase in his catch as the result of the operation of a rearing pond at Rogers City for a limited time some years ago. The rearing pond was operated voluntarily by local commercial fishermen.

Sea Lamprey Run Smaller

Although sea lamprey spawning runs were reported in 68 streams flowing into the five Great Lakes last year, only 20 runs had been observed this year by the latter part of June. Conservation Department fisheries men and their volunteer co-operators report that failure of the lampreys to appear in the numbers and places anticipated may be due in part to delayed spawning as the result of cold weather. At Manistique, Mich., where thousands of lampreys were trapped in 1946, the parasites have yet to make an appearance.

Fishing Tug "Favorite" Lost

The 38' fishing tug *Favorite*, owned by Eino Tuomela of Marquette, Mich., was blown on the rocks of Presque Isle in Lake Superior recently after she had become disabled. A Coast Guard picket boat came to the rescue and attempted to pull the tug off, but the tow line fouled in the propeller of the rescue vessel and that craft also was driven aground. The *Favorite's* engine, nets and net boxes were recovered by Coast Guardsmen, with the aid of 15 commercial fishermen from the Marquette area.

Making Good Trout Catches

Commercial fishermen operating in the Whitefish Bay region of eastern Lake Superior are reported to be making some heavy hauls of lake trout, as well as sizable takes of whitefish. Several of the fish tugs which usually operate in waters of Lake Huron and Lake Michigan are now whitefishing in Lake Superior. The major portion of the eastern Lake Superior catch is being shipped to Eastern and Southern markets, with a small part of the takes being purchased by local markets.

The Marquette and Munising, Mich. fishing fleets have been constantly active since the opening of the Spring season's open-water netting operations. Average catches of edible lake fish are running from 400 to 1500 lbs. daily per craft, with some hauls of trout and whitefish reportedly running above last year's high for early June.

Perch Plentiful in Green Bay

The commercial perch fishing season reopened on June 1 in Green Bay waters after being closed for 45 days, and good catches were made in several sections of the Bay area. However, the larger operators are concentrating on netting operations for trout and whitefish. Many sizable catches are being sold to the local and Southern markets, with a certain amount being regularly earmarked for the New York markets.

Rackstraw Buys Booth Fisheries Plant

A. G. Rackstraw, Jr., owner of the Rackstraw Fish Co., Bay City, Mich., has purchased the local branch of Booth Fisheries



The 43' tug "Caroline" owned by Arthur Dettman, Algoma, Wisc. She is powered by a 54 hp. Kahlenberg Diesel and uses a Crossley lifter.

Corp. He plans to utilize the property for wholesale distribution of fish throughout Michigan and to eastern markets during producing seasons.

The business, which has been in operation since 1878, has been owned by Booth since 1909. A modern fish plant was erected in 1928, and a freezing unit possessing a 50-ton storage capacity was installed recently. The property has a frontage of 150' on the Saginaw River, extending back 300'.

Permits Carp Seining in Inland Waters

The Wisconsin House recently passed a bill which would grant the 39 licensed commercial carp fishermen in the State the right to seine carp from inland waters. The bill provides for paying commercial fishermen 2c per pound for all the small carp they turn in, and specifically bans Conservation Department seiners from operating in those waters assigned to the commercial crews.

Cooperative Advertising Program

Using the theme "Make Nutritious Fish a Daily Dish", the Wisconsin Fish Dealers Association is now running a series of weekly advertisements in *The Milwaukee Journal* covering both fresh and salt-water fish. This advertising campaign is being sponsored by fish brokers, processors, wholesalers and retailers, and each advertisement features a different fish recipe, emphasizing ease of preparation plus points on the natural nutritional value of fish.

New Trap Netter Joins Huron Fleet

E. G. Weigand of Weigand Fishery, Huron, Ohio, has a new 38', all-steel, double welded trap netter built by Marks' Welding of Vermilion, Ohio, and christened *Valiant*. The boat is capable of carrying 10 nets and the Chrysler Crown gasoline engine gives her a speed of 15 knots.



The 36' tug "Ike" owned by Manthei Bros. Fishery, Manistique, Mich. She is powered by an 85 hp. Gray gasoline engine with 2:1 reduction and swinging a 23 x 23 Hyde propeller.

Virginia Favors Use of Dredges in Potomac

Legislation which would permit the use of small oyster dredges in the Potomac River and put some enforcement teeth into laws against the taking of undersize oysters was advocated by a group of over 100 Virginia oystermen who attended a public hearing on Potomac River oystering sponsored by a joint Maryland-Virginia legislative study commission, and held at Colonial Beach on June 16. The hearing, which was the first held by the Commission, was arranged at the request of the Potomac River Oystermen's Association.

In advocating the use of dredges, Capt. Ed Cox, veteran of 47 years' oystering on the Potomac River, stated that Potomac River oystermen cannot make a living by the use of tongs, powered either by hand or by mechanical devices in the case of so-called "patent tongs", which are now the only legally recognized oystering method on the River. Capt. Cox said he favored a law which would permit the use of scrapes or dredges not bigger than 36" wide nor heavier than 60 or 70 lbs. He held that the use of such dredges would not be harmful and might be beneficial, or, at worst, less harmful than patent tongs.

Capt. Cox and his colleagues all are strong supporters of stiff enforcement of the oyster cull law, which they advocate revising to include a stiffer penalty for the taking of young oysters. They favor fining oyster houses or buyers of undersized oysters, as well as oystermen, if necessary, and recommend a \$100 fine for the first offense, \$200 for the second, and authority to revoke a man's license on the third offense. It was agreed that the oystermen themselves should bear the main cost burden of conservation and enforcement by means of a tax on the catch.

Fish Production Shows Increase

Hampton Roads fish production for the first five months of this year totalled 20,137,510 lbs., and showed an increase of nearly 3,000,000 lbs. as compared to landings during the same period of last year, according to the Hampton office of the Fish & Wildlife Service. This year's monthly catches began to exceed those of 1946 in March, and the upward trend has been steady since. May production was 4,230,110 lbs., compared with 2,679,500 lbs. during the same month of last year.

Norfolk area landings for the month of June amounted to 2,077,000 lbs., as compared to 3,823,000 lbs. in May and 2,273,000 lbs. in June of last year. Of the total, 58,000 lbs. were landed by draggers and 2,019,000 lbs. came from pound nets. Croakers led the varieties, with landings of 1,178,000 lbs.; followed by sea trout, with 689,000 lbs.; and scup, with 54,000 lbs.

Large Schools of Croakers

Large schools of croakers are now being seen in Pocomoke Sound on the bars about a mile north of Big Watts Island. Dorsey Crockett recently caught 35 boxes of croakers in a drift net. The fish sold for \$7.00 a box.

Crab potters are making some good catches of croakers in Tangier waters. Capt. Peter Crockett took 35 lbs. out of 5 pots June 29. He sold them on the Tangier market for 10c a pound.

Crabs are now scarce in Tangier waters, and neither hand netters nor scrapers are making big catches. They are reported to be taking from 50 to 75 peeler crabs a day, for which Tangier crab packers pay 5c apiece.

Two crab runners, Capts. George Pruitt and Charlie Williams, are now freighting hard crabs from Tangier Island to Crisfield, Md. Stanley Marshal of Smiths Island, Md. is running crabs from Tangier to Deals Island, Md.

Commercial and Sport Fishermen Meet

Causes and possible remedies for Virginia's diminishing supply of seafood were discussed on June 20 at a meeting sponsored by the Izaak Walton League of Norfolk, and attended by commercial fishermen. The purpose of the conference was to bring the commercial and sport fishermen closer together, to the end that their mutual problems may be worked out on a fair basis.

Development of restocking facilities was suggested by O. A. Bloxom of the Battery Park Fish & Oyster Co., Battery Park, as a solution to the problem of the diminishing supply, and J. R. Lawson of Hampton advocated that representatives of all Atlantic seaboard States meet to discuss the problem.



The 60' crab dredging and fishing boat "Marion Sue Handy" owned and skippered by Capt. Charlie L. Pruitt of Tangier, Va. She has a capacity of 45 tons and is powered by a 75 hp. Buda Diesel with 3:1 reduction turning a Hyde propeller. She uses Columbian rope.

Five committees were named to study all phases of the fishing industry and make recommendations, with one of the committees to consider the advisability of naming two additional members of the Virginia Fisheries Commission from the Tidewater water area. This committee includes the following members: Bert East, William Ballard, Wade Walker, H. L. Gordon, O. A. Bloxom and Arthur Thompson.

The other committees, which represent the four branches of the fishing industry, are as follows: crab committee, G. W. Amory, Floyd Moore, F. H. Ayers and Harry F. Baughman; trawl committee, J. R. Lawson, Wesley Mills, Felton Forrest and James Poole; oyster committee, Frank Miles, I. T. Ballard and O. A. Bloxom; and pound net committee, A. S. Forrest, Enoch Hudgins, Marshall Johns, W. H. Graham, Ed Johnson and Bert East.

Lawsons Purchase Government Craft

Capt. John and Charles Lawson of Hampton recently purchased from the U. S. Maritime Commission the 103' x 22' x 9' wooden vessel *Tenderheart*, which they plan to convert to fishing. The craft, which is powered by a 400 hp. Atlas Diesel engine, was built by W. A. Robinson, Inc. of Ipswich, Mass. in 1944 for the Navy, and subsequently was turned over to the British Government under Lend-Lease.

Obstruction of Navigational Fairways

More than 150 Virginia fishermen were present at a hearing held at Williamsburg on June 27 by Col. George T. Derby of the Norfolk Army Engineers' office for the purpose of discussing the alleged obstruction of navigational fairways by oyster ground markers, pound nets and crab pots. Col. Derby said that lights and markers required by law must be placed on all pound nets, and stated that crab pots must be properly marked and should not be placed in fairways.

Regarding the question as to what if anything the Army Engineers intend to do about obstructions in the Mobjack Bay area, Col. Derby said that any oyster ground buoys, pound nets or crab pots found upon investigation to be obstructing fairways must be removed. Those fairway and channel lines not marked at present will be marked so that areas not to be obstructed will be known to all concerned.

Concerning a report that stakes instead of buoys are required for crab pot stands, Col. Derby said there was no objection to the use of buoys as long as they do not obstruct fairways. It was proposed at the meeting that additional areas for the erection of fishing structures be established in the middle grounds of Hampton Roads.

The following committee was named by Col. Derby to study the matter of obstruction in navigational fairways and report its recommendations: Charles M. Lankford, Jr., fisheries commissioner; J. S. Darling of J. S. Darling & Son, Hampton; E. P. Roane of Williamsburg; B. I. Miles of Norfolk; and George D. Rittenhouse of the Army Engineers' office.

Florida Bills Provide Funds for Fisheries

The Florida Legislature recently passed a bill appropriating \$45,000 a year to the University of Miami's marine laboratory for scientific research, management and development of the fisheries. Although its annual salt-water fish production is valued at \$5,000,000 to \$10,000,000, Florida up to now has been the only State on the eastern seaboard with no State appropriation for scientific research, according to Dr. F. G. Walton Smith, director of the laboratory.

Dr. Smith, together with J. T. Hurst, supervisor of conservation, and William Hendry of the Governor's fisheries advisory committee, has worked out a plan for development of the fisheries. He claims that one of the consequences of the lack of scientific research has been the deterioration of the sponge and oyster industries, resulting in a loss to the State of several million dollars each year.

The Senate completed legislative action early in June on the House-passed general oyster cultivation bill, which carries an appropriation of \$100,000. Introduced by Rep. Bourke Floyd of Franklin County, the bill applies only to public areas, and provides for setting up an oyster culture division in the State Board of Conservation, to work with the Fish & Wildlife Service.

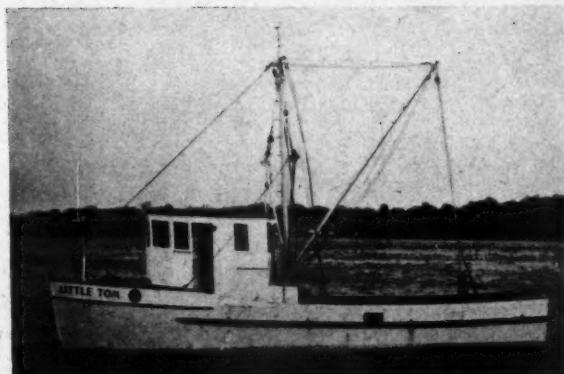
Money collected by the State in the future from leases for the dredging of dead oyster shell would be deposited in an oyster conservation fund under the bill, and dredging of dead shell deposits from living oyster grounds would be prohibited.

The bill empowers the State Board of Conservation to designate public bottoms as conservation districts for the propagation of superior oysters, and provides that the Governor shall appoint commissions to supervise the districts. These commissions would be composed of 2 experienced oystermen, two oyster dealers, two businessmen not directly connected with the industry, and the State's chief conservation agent in the particular area.

Closed Seasons on Trout, Mullet

Governor Caldwell recently signed into law a measure setting a new closed season on salt-water trout from May 20 to June 20, inclusive. Fishermen in Wakulla, Levy, Citrus, Hernando, Taylor, Baker and Pasco Counties, who had been exempt from observing the old closed season by special local laws, will come under the new regulation.

The Florida Legislature has passed a bill establishing a State-wide closed season on mullet from December 10 to January 20. Under the bill it would be unlawful to have possession of fresh



The 38' trawler "Little Tom" owned by Joe and Tom Smirch Shrimp Co., Mayport, Fla. and powered by a 113 hp. General Motors Diesel. She was built by Billinger & Son Shipyard, Jacksonville, five miles from water and transported over the highway for launching by crane in the St. Johns River.

or salted roe or mullet five days after the beginning of the closed season. Nearly half the counties were exempt from the previous closed season law by special acts.

Seek Extension of Sponge Diving Area

Due to a shortage of sponges in areas where sponge diving is regularly carried out, Tarpon Springs sponge producers are considering a United States Supreme Court test of a Florida law, passed in the 1890's, which prohibits diving boats from harvesting in parts of the Southeastern Gulf of Mexico. The prohibited section extends more than 30 miles from shore in some areas, and includes territorial waters around the keys of the Key West area, as well as a large portion of the Gulf. According to City Commissioner Mike Bouchlas, the law prohibits diving in some areas which are too deep for hookers.

Rep. Archie Clement's bill to permit sponge divers to operate a minimum of 3 miles from shore instead of the present 10 miles was rejected by the House Salt Water Fisheries Committee on June 2. The Committee had approved the bill previously, but held a new hearing at the request of Bernie C. Papy of Key West, who said the bill would adversely affect spongers in his county, and would tend to destroy sponge breeding grounds.

Franklin County Dealers Organize

A group of seafood dealers met at Apalachicola recently and formed a new organization, the Franklin County Seafood Dealers Association. Officers and directors of the Association are as follows: president, B. G. Patton; vice-presidents, A. B. Simmons, Carrabelle, G. W. Segree, Eastpoint, and Alton Bradley, Apalachicola and West Beaches; secretary and treasurer, W. L. McCormick, Apalachicola; directors, Wm. F. Randolph and B. J. Tarantino, Apalachicola.

Committee chairmen include the following: shrimp propagation, I. D. Wade; salt-water fish, J. Taranto; oyster culture, Wm. F. Randolph; marketing, J. O. Anderson; conservation, J. O. Bragdon and P. L. Nicholas; and crabmeat, Albert Moore.

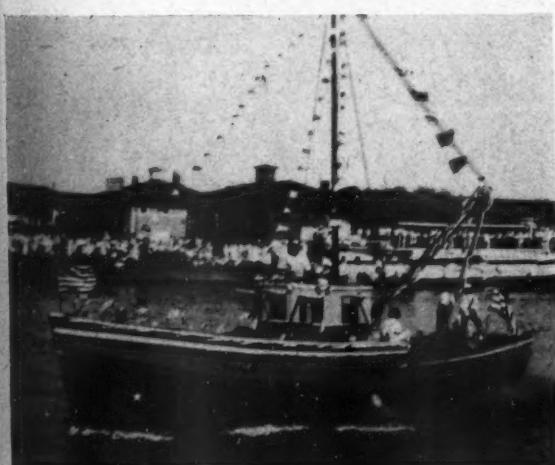
"Red Tide" Recurs

Fort Myers fishermen recently reported a recurrence of the "red tide", which during the early part of this year killed millions of fish in the Gulf waters of Lee, Collier and Charlotte Counties. The tide has been noted and its effects felt from Clam Pass north of Naples up to Punta Rassa, and hundreds of dead fish of all types from jellyfish to tarpon and pompano, as well as thousands of small pinfish and crabs, already have been seen.

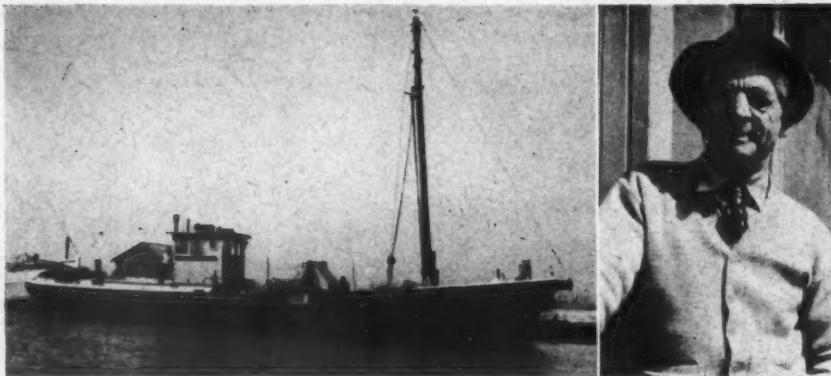
According to a group of marine biologists from the University of Miami, headed by Dr. F. G. Walton Smith, director of the University's marine laboratory, the cause of the "red tide" is believed to be a mass concentration of a certain micro-organism which exudes poison.

RCA Opens Jacksonville Office

Radiomarine Corporation of America has opened a new district office and marine service station at 644 East Bay St., Jacksonville. A. G. DeCamp, formerly manager of Radiomarine's Miami office, is in charge of the new office, while Alex Vadas has been made manager of the Miami office.



The 47' shrimper "Irene" owned by Alvaro C. Murta, Brunswick, Ga. and skippered by Capt. D. Manita. She has a capacity of 9 tons and is powered by a 60 hp. Superior Diesel with 2:1 reduction, using Gulf lubricating oil and swinging a 30 x 18 Federal propeller. Her equipment includes Columbian rope and Willard batteries.



The 80' oyster dredger "Timothy Bateman" and her owner, Capt. James Cobb of Port Norris, N. J. The vessel is powered with a 165 hp. Gray Diesel with 3:1 reduction and power take-off to operate her Fagan dredges. She uses Columbian rope and carries a crew of 15. Capt. Cobb has been in the oyster business 47 years and also owns the 60' "Stanton".

Maryland Enacts Several New Fisheries Laws

The recently adjourned Maryland General Assembly passed a number of laws pertaining to the fishing industry of the State. The following is a digest of the principal legislation enacted:

Senate Bill 75—provides that cultivated oysters from leased beds in Wicomico County shall be removed only with tongs or patent tongs, and prohibits the dredging of privately planted oysters in that body.

Senate Bill 160—a measure providing that a lessee shall maintain "reasonable diligence" in keeping his buoys in position, but the temporary loss or destruction of such buoys shall not permit unauthorized persons to trespass upon such leased areas.

Senate Bill 174—reinserts the old Goldsborough definition of a natural bar. It requires that no bar which has been successfully resorted to for a livelihood, whether continuously or at intervals within five years prior to the making of a resurvey, can be leased provided that the actual condition of the area in question shall be taken into consideration in determining whether or not said area is a natural bar or bed.

Senate Bill 172—sets up a seed area at the head of the Bay. It also requires that packers sell 65% of their shells to the State for rehabilitation purposes, and provides for the collection of a 5c per gallon tax on all oysters shucked.

Senate Bill 313—makes it unlawful for the Department of Tidewater Fisheries or any other agency of the State to lease any natural oyster rock or bar in the Chesapeake Bay.

Senate Bill 314—requires that the Department of Tidewater Fisheries shall spend all of its special appropriated funds and all monies collected from the oyster industry for oyster propagation. It provides that a committee shall be set up in each tide-water county to consult with the Department on planting in the respective counties, and further specifies that all plantings must be made on natural oyster bars.

Senate Bill 464—extends the season for taking oysters from leased lands in St. Mary's County to April 15th. Heretofore, the end of the season has been April 1st.

House Bill 229—legalizes the use of crab pots in Tangier and Pocomoke Sounds. The present regulations of the Commission limit the use of crab pots to the Chesapeake Bay proper and the Potomac River.

House Bill 333—provides that the Commission shall carry any interested persons for the examination of any areas up for resurvey and reclassification. It further provides that public hearings shall be held to decide whether or not the bar in question should be reclassified.

House Bill 339—provides that crabs may be taken in Anne Arundel and Harford Counties by means of a hand-drawn net seine not exceeding 50' in length.

House Bill 363—provides that lessees may remove oysters from their leased bottoms by means of a dredge, and that no person may dredge oysters from leased bottom unless he has a financial interest in the oysters planted on the leased area.

House Bill 408—revises the procedure for issuing licenses for commercial fishing to permit those persons to obtain licenses

who went into War industries or who were ill and unable to get a license in 1940 or 1941.

House Bill 518—simplifies the concurrent laws of Maryland and Virginia so that they can be easily read and understood. It permits Maryland to bring Virginia violators apprehended in the Potomac River by Maryland officers into Maryland courts for trial. The present law specifies that violators taken in the Potomac River must be tried in their home States.

House Bill 840—permits the use without a license of pound nets which have an over-all length not in excess of 40 yards, and limits the number of such nets to 5 per person.

House Bill 715—permits commercial fishermen to use areas adjacent to a land owner's property if the owner or the tenants do not use the fishing rights within twenty days after receiving notice.

Eastern Shore Good Seed Producer

The waters of Maryland's Eastern Shore are generally better for producing oyster seeds than the Western Shore of the Chesapeake Bay, according to James B. Engle, Fish & Wildlife Service biologist who has been studying oyster production in Maryland waters for several years. Engle reported that results of his investigation are contradictory to the idea held in the past that the head of the bay is a good seed area.

He also reported that many Bay tributaries, including Fishing Bay, Tangier Sound and the Choptank River, are capable of producing seed equal to the amount of oysters harvested. Engle predicted that as the result of the planting of small oysters and shells and the leasing to private planters of oyster grounds in Tangier Sound, this area again will be one of the best in the Chesapeake Bay. He added that rehabilitation of depleted Chesapeake Bay oyster bars has not been tackled in a major way as yet because of a shortage of seed, shells and funds.

Recommends Leasing of Oyster Bars

In a final report, Edwin Warfield, Jr., who recently resigned as chairman of the Tidewater Fisheries Commission, urged leasing of oyster bars in the Chesapeake Bay to private planters as a means of restoring depleted beds. He stated that the existing State program of oyster rehabilitation is entirely inadequate, and that State planting operations are not likely to be as effective as those conducted by private firms.

Regarding the situation in the Potomac River, the retiring chairman recommended joint planting by Maryland and Virginia because of the smaller area involved.

Crabs Getting Scarce

There was an abundance of crabs early in the season, but by the middle of June they had begun to become scarce. The size of the crabs in the first run was small, but as the season advanced the crabs taken were larger, with a resultant stronger demand and higher price.

Although soft crabs usually make their appearance on the Seaside two weeks before they appear in the Chesapeake, this season they arrived two weeks later than in the Chesapeake. However, Seaside crabbers have been receiving high prices for their catches due to the scarcity in the Chesapeake. Most of the Seaside crabs are handled by Crisfield packers.

Western Shore fishermen are having a successful season, and report that trout and croakers are plentiful. However, trout and croakers are scarce on the Eastern Shore.

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New Jersey Council Reports Reappearance of Eelgrass

Eelgrass, which furnishes food and cover for many of the fish, crustaceans and mollusks of New Jersey bays and waterways, gives evidence of returning to the State's shore, according to the Fish and Game Council of the State Department of Conservation. Eelgrass practically disappeared from the entire Eastern coast in the early 1930's because of a blight.

Taking advantage of the fact that existing beds in the Barnegat Bay area have increased in size, the Division of Wildlife Management of the State Fish and Game Division recently took plants from the vicinity of Island Beach in the Barnegat Bay area and transplanted them in sections of Great Bay in the vicinity of Shad Island, Black Point, Reeds Bay and Grassy Bay.

Big Tuna Taken in Nets

A 410-pound tuna was taken off Long Beach Island during June in the nets of the Surf City Fishery, Ship Bottom. The giant blueblack measured 8'3" in length, and had a girth of 5'6".

Advocates Establishment of Freezer

Joseph LaRosa, Sea Isle City pound fisherman, told members of the Sea Isle City Rotary Club on June 16 that the eventual answer to security for local fishermen is a freezing plant in which fish may be stored when the market is slack and disposed of when prices rise. He said that such a plant would cost from \$300,000 to \$400,000, but could be financed.

Oyster Planting Season Successful

Oystermen of the Maurice River area report a successful planting season through May and June during which time oyster shells were carried to the grounds and seed stock was transplanted from the State beds to private beds. For the first time, the State of Delaware planted shells on its natural beds, with 30,000 bushels being taken from New Jersey packing plants. The freight hire for these shells was contributed by boat owners of Delaware.

Long Island Endorses Inlet Stabilization Plan

Both the Babylon Town Board and the Suffolk County Board have passed resolutions endorsing the Federal Government's plan for the stabilization of Fire Island Inlet, and both groups have agreed to furnish, free of cost to the United States, all lands, easements and rights-of-way as may be required for the improvement. The stabilization, as recommended by the District and Division Engineers, calls for the establishment of a channel through the Inlet, 14' deep at mean low water and 250' wide, at an initial cost of \$309,000, with annual maintenance estimated at \$92,000.

The Town Board's approval was qualified by the recommendation that fill to be pumped from the Inlet be used to reinforce the shoreline of Oak Beach rather than that of Point Democrat on the Fire Island strand. In passing the resolution favoring the Inlet project, Board members pointed out that the fill now blocking the channel was largely eroded from Oak Beach.

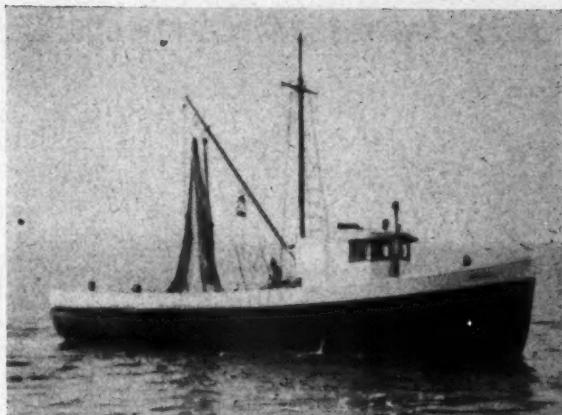
Although War Department Engineers in the Division and District Offices have recommended the Inlet stabilization plan, final approval must come from Congress.

East End Fishermen Join Association

A large number of commercial fishermen working out of Promised Land and Montauk joined the Long Island Fishermen's Association on July 1. Heretofore only a few fishermen in that area were members. Every shipping point in Suffolk County is now covered by the Association, except for the clammers in Huntington and Babylon townships.

Young with International Fisheries

Leo Young has accepted the position of manager of the Fishery Products Division of International Fisheries Corp., New York City, and will continue to function as a broker. On the whole, he will represent the same packers as in the past, and will continue to specialize in frozen fishery products for the domestic



The 59' dragger "Malolo" owned and skippered by Capt. Carl Erickson, Amagansett, N. Y. She is powered by a 115 hp. D13000 Caterpillar Diesel with a 2:1 Twin Disc reduction gear and swings a 40 x 32 Columbian propeller. Her equipment includes a Hathaway winch, Willard batteries, Columbian rope, and Gold Medal nets made by Linen Thread Co. and she is painted with International paint.

Moulded Frozen Fillets Developed By Atlantic Coast Fisheries Co.

Atlantic Coast Fisheries Co. introduced a revolutionary new frozen fish fillet product at a demonstration in its Boston fish plant on June 26.

By means of a special process developed after 9 years of research, fish fillets of cod and haddock are moulded into a single piece of standard thickness and weight. This is the first time that filleted fish has been packed in solid block form with adhesion between the segments of fish.

The fish is placed in a coverless one-pound waxed carton 3/4" deep, 8" long and 4" wide, and wrapped in attractive blue, white and silver aluminum foil which protects the fish from dampness and helps preserve it. The result is a neat, odorless and moisture-free package of fish that looks like a box of candy. Ten packages are packed in a master carton for distribution.

The package can be sliced without unwrapping so that the consumer can use only the size portions desired, with the remainder being placed in the refrigerator. The fish can be put in the cooking pan immediately, without defrosting, thus retaining all its vitamins, minerals and oils. The uniformity of size and shape of the product allows even cooking and seasoning permeation of all portions. Cooking does not alter the shape of the fish.

The filleted fish used for the new product is produced with Atlantic Coast's automatic filleting machine for which the Company last month received the first "Food Industries" achievement award.

"Nancy B." Damaged by Explosion

The Boston dragger *Nancy B.*, skippered by Capt. Guy Passanisi, limped into port on June 11 leaking badly after a cylindrical object which was pulled up in her net 10 miles off Race Point on Cape Cod exploded and ripped the seams of the craft. The Coast Guard has ordered an investigation to determine the nature of the object which caused the explosion.

market, and dried, smoked, canned and frozen fishery products for the export market.

"Col. Lindbergh" Towed to Port

The 50' dragger *Col. Lindbergh*, owned by John C. Van Essendelft of West Sayville, was towed to Islip by a Coast Guard launch on June 19, after she became disabled a short distance off Fire Island Inlet. Van Essendelft and his son Ira were aboard the craft.

Gulf Canned Shrimp Pack Shows Marked Gain

The total shrimp pack of plants operating under the Seafood Inspection Service of the U. S. Food and Drug Administration during the 1946-47 season was 259,995 standard cases, as compared to 161,228 cases during the 1945-46 season. This season's pack, which was about 65% larger than the previous year's very short production, has moved so well that a market for double this amount is foreseen by some authorities in the Fall consuming season. The average pack during the 5 year period ending June 1945 was 562,000 cases.

Louisiana shrimp production improved during the two-week period prior to the closing of the season on June 10, and a number of boats in the fleet brought in fine catches. However, in general the State's 1947 shrimp season was unfavorable, and catches were small.

Intensive Seismographing to Be Avoided

Commissioner Luther S. Montgomery of the Louisiana Wild Life and Fisheries Department recently announced that in the future oil companies will be given at least 60 days in which to submit bids for the leasing of submerged coastal lands, thus avoiding concentrated seismograph exploration, which fishermen claim causes shrimp and other marine life to scatter. In the past, only a brief period of time has been allowed for receipt of such bids, and since usually many companies are interested, concentrated "shooting" in one area by seismograph crews from various oil companies is the result.

Atchafalaya Bay Channel Deepened

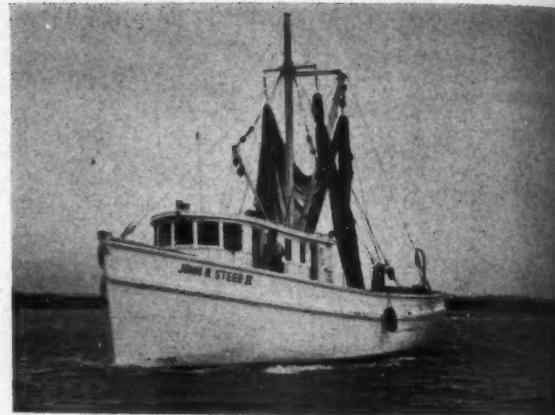
The Atchafalaya Bay Ship Channel, which is regularly used by Morgan City, Berwick and Patterson, La. shrimp trawlers, was in the process of being deepened by a U. S. Government dredge the middle of June. While the amount of money allotted for the work is insufficient to deepen the channel to project dimensions of 20' x 200', it is believed that before present funds are exhausted additional money will be available to finance improvement to the extent requested and approved.

Biologist to Study Oyster Mortality

Dr. Howard Malcolm Owen, who has spent many years in marine life research, has been appointed biologist for the Louisiana Wild Life and Fisheries Department, and will devote his time to a study of causes for the excessive mortality rate of oysters in many sections of the Louisiana coastal areas. He will be stationed at the Department's laboratories at Grand Pass and Caillou Lake.

Fishermen Re-elect Chatham

Oswald Chatham of Biloxi, Miss., who has been president of the Gulf Coast Shrimpers' and Oystermen's Association since



The 65' shrimper "John R. Steed II" owned by Tom Steed of Steeds Fish Co., Lake Charles, La. She has a capacity of 29 tons and is powered by a 135 hp. D17000 Caterpillar Diesel which turns a 46 x 32 propeller through a 2:1 reduction gear to give a speed of 12 knots.

July 1, 1944, was re-elected to that office on June 9. Other officers named were Adolph Balias, vice-president; Charles Allen, secretary; Leon Strong, treasurer; and Walter McVeay, secretary for Pascagoula.

"Explorer" Joins Carlton Fleet

The 66' x 18' x 6' *Explorer*, which is equipped with the most modern facilities for shrimping, recently joined the fleet of Carlton Fisheries, Berwick, La. Edmund Kiff is skipper of the craft.

Closed Season on Shrimp

Commissioner Luther S. Montgomery of the Louisiana Wild Life and Fisheries Department recently announced that under provisions of that State's new closed shrimp season law, enforcement agents have been instructed to confiscate all vessels caught shrimping in inside or outside waters from June 10 to the second Monday in August of each year. Vessels in the act of bringing fresh shrimp into Louisiana ports, even though the shrimp may have been alleged to have been taken in waters beyond the 27-mile limit, will be seized for transporting shrimp illegally.

The shrimping season in Alabama's territorial waters, which was closed May 17, will be reopened in the late Summer or early Fall. An extension to June 1 for operations in Gulf of Mexico waters outside the territorial waters was granted May 16 upon request of commercial shrimpers, who reported schools of large shrimp were working therein.

Shrimp Boat Damaged by Fire

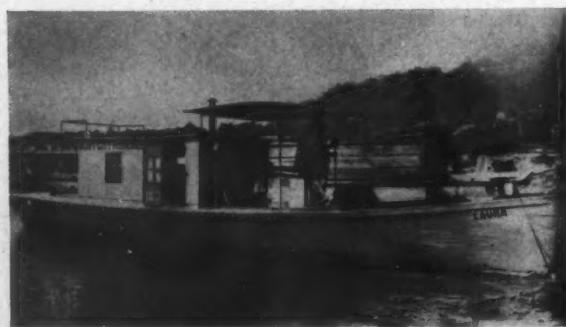
A shrimp boat owned and operated by J. E. Gibson caught fire at Pascagoula, Miss. on June 6 after an explosion which occurred when the engine was started. Gas that spilled out of a 55-gallon tank on the rear of the boat was said to have caused the explosion. The boat was sunk in order to save the hull, but the whole top structure of the vessel was badly burned, and the nets were lost.

Fish Meal Plant Near Full Production

The Standard Fish Meal Co., new Jackson County industry owned by H. R. Humphreys and situated on the Escatawpa River about 4 miles from Moss Point, Miss., was moving into full scale production during June. The plant is equipped with the most modern types of fish processing machinery, including a condenser which removes the fish odor from the discharged water vapor. In addition to the factory, valued at an estimated \$250,000, the firm operates six 125-ton porgy boats and a number of smaller "perch boats".

Nordberg Opens New Office

A new district office of Nordberg Mfg. Co., Milwaukee, manufacturers of marine engines, has been opened in the Pere Marquette Building, Room 904, New Orleans. This office is the headquarters for W. J. Moran, district manager for the Heavy Machinery Division of Nordberg.



The 40' Mississippi River fish boat "Laura" owned by Bluff City Fisheries, Inc., Natchez, Miss., and skippered by Capt. Clarence Hunter. Built in 1925, she has been plying the river ever since buying fish from fishermen along the river. She is powered by an 80 hp. Red Wing gasoline engine using Gulf lubricating oil and turning an 18 x 22 Hyde propeller. Her equipment includes Columbian rope, Pflueger hooks, and Willard batteries.

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New Bedford Producers Discuss Conservation

Conservation of haddock by use of a 5" mesh net rather than the smaller net currently used was discussed by speakers at a recent meeting of the New Bedford Seafood Producers Association. Dr. William F. Royce of the New Bedford office of the Fish & Wildlife Service and Howard Chuck of the Cambridge office of that agency, told fishermen that the haddock supply will be adversely affected if larger nets are not used. It was asserted that the 5" net would enable one additional spawning of the fish.

Dr. Royce, who declared that little conservation can be accomplished unless all ports participate, suggested that New Bedford fishermen discuss the use of a larger net with boat owners in Gloucester and Boston.

Two Draggers Sink

The 66' New Bedford scallop dragger *Acushnet*, owned by Mrs. J. E. Jacobsen of South Dartmouth and skippered by Capt. Ole Lund of Fairhaven, sank 127 miles off Pollock Rip Lightship on July 10, after colliding with the New York dragger *Rainbow* in a fog. No member of either crew was injured, and the *Acushnet's* 10-man crew was taken aboard the *Rainbow* and landed at New Bedford. The *Rainbow*, which is owned by Capt. Hans H. Syre of Brooklyn, N. Y., suffered little damage except for a hole that was stove in her port side.

The dragger *Francis* sank in the vicinity of Hen and Chickens Lightship off New Bedford on June 22. The dragger's two crew members were removed by an oil tanker and were taken to Buzzards Bay.

"Bessie" Changes Hands

Wilfred C. Rousseau of New Bedford recently purchased the dragger *Bessie* from Gerald F. Goodwin of Cambridge and Conrad Verrier of New Bedford.



The new 82' scallop dragger "William D. Eldridge" owned by Wm. D. Eldridge of New Bedford. Below, left, her skipper, Capt. Thomas Tonnesen and right, Capt. John Murley who brought her from Morse Boatbuilding Co., Thomaston, Me. She is equipped with a 180 hp. Atlas and a Hathaway winch.

Several Vessels Go Aground

The 61' dragger *Ronald & Mary Jane*, owned and skippered by Capt. Henry Fortes of New Bedford, went aground off New Harbor, R. I., near Dicken's Point, in a heavy surf and fog on July 1. The skipper and 6 crew members escaped in three dories, and rowed blindly for 2½ hours through the surf and fog in a futile attempt to reach New Harbor, which was only 100 yards away. The fishermen finally were rescued by a Coast Guard motor lifeboat which had spotted their lighted flares.

The dragger *Amelia R.*, owned by Joaquim Rivers of Provincetown and skippered by Joe Roderick, went aground on July 9 a few hundred yards west of Long Point Light in Provincetown Harbor. The Coast Guard reported that she was undamaged.

The Coast Guard cutter *Legare* pulled the stranded New Bedford fishing vessel *Tip Top* from a shoal on the northeast corner of No Mans Land June 12, and towed the craft to its home port for repairs. The dragger went aground the previous day in a dense fog.

"Junojaes" Repowered

The 97' dragger *Junojaes*, owned by Capt. Mike Smith of New Bedford, has been repowered with a 400 hp. Atlas Diesel. The engine replaces a 300 hp. Atlas model and was installed at Hathaway Machinery Co., Fairhaven.

Lobster, Swordfish Boat Launched

The 39' lobster and swordfishing boat *Sea Foam* built by Merton B. Long of Bourne at his Monument Beach yard for Burton Hammond, who will operate out of Pocasset Harbor, recently was launched at Barlow's Landing, Pocasset. Mrs. Ida Wood, sister of the owner, was sponsor.

Texas Commission Acts to Bar Non-Resident Shrimpers

The Texas Game, Fish and Oyster Commission recently unanimously approved a resolution authorizing cancellation of resident commercial shrimp licenses held by all persons who are considered by the Commission as operators of non-resident boats. This action was taken at the suggestion of Commissioner Will Watt of Austin, who said he believed it would strengthen the State's stand in pending court litigation testing the constitutionality of the Texas non-resident shrimp license law, which requires a \$200 license fee for out-of-State fishermen and a \$2,500 fee for out-of-State vessels.

In a hearing at Corpus Christi June 7 Judge Jack Pope of the 94th District Court ruled that the law is unconstitutional, and granted Vincent Depuglio of Galveston a temporary injunction against State collection of a license fee of \$2,500 against each of 15 shrimpers which he operates. Judge Pope ruled that the non-resident license law, passed in 1945, impedes the free flow of commerce between States. So far, lower courts have given the State one favorable and one unfavorable decision in similar cases.

Immediately following Judge Pope's ruling, attorneys representing the Texas Game, Fish and Oyster Commission appealed the case to the Texas Supreme Court in the first formal step toward obtaining a high court judgment on the constitutionality of the law.

Shrimp Supply Varies

Shrimp have been running in considerable numbers recently near Galveston and Corpus Christi. However, such has not been the case in the Gulf adjacent to Port Isabel, where the crustaceans have been very scarce.

Asks Permission to Construct Wharf

The Southern Fish Co., Port Isabel, has applied to the District Office of the Army Engineers at Galveston for permission to construct a 210' x 10' timber wharf on the east bank of the Intracoastal Waterway, atop an existing concrete bulkhead. Deck elevation will be 7' above mean low water.

Marine Laboratory Nears Completion

Construction of facilities for the new University of Texas Marine Institute at Port Aransas will be completed this Summer. The Institute's work will include a study of new and better methods of fish, shrimp and oyster propagation and culture; and a study of more scientific methods of fishing.

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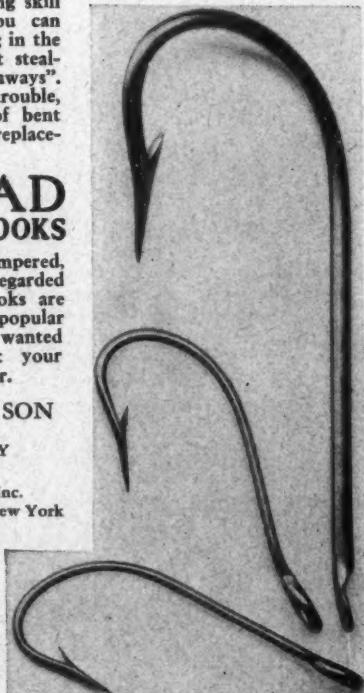
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Maine Seeks Funds for Joint Clam Study

The Maine members of the House of Representatives plan to seek an appropriation under a Congressional deficiency bill for a joint Maine-Massachusetts study of present U. S. Public Health Service methods for determining contamination of soft shell clams. Efforts also will be made to develop a shellfish cleansing method more appropriate than that now in use at Newburyport, Mass., and an investigation will be made to determine the effect of cooking on the bacteriological condition of clams.

The decision to seek funds for such studies was made at a conference held on June 18 in the Washington office of Congressman Robert Hale of Maine, and attended by other Maine Congressmen; Congressman Bates of Massachusetts; Maine, Massachusetts and New York State officials; and representatives of the Public Health Service and the Fish & Wildlife Service. The investigations would be conducted by the Maine Department of Agriculture, the Maine Department of Sea and Shore Fisheries and the Massachusetts Department of Health, with funds to be allocated jointly to Maine and Massachusetts under the advisory care of the U. S. Public Health Service.

Arthur D. Weston, chief sanitary engineer for the Massachusetts Health Department, attended the meeting and advocated a return to a former method whereby water within the clam shell was tested to determine pollution. The present method consists of testing sea water over the clams and ground-up clam meat.

The Maine Congressmen and State officials declared that the standards in use by the Public Health Service are those used for oysters, and are not applicable to clams. They believe a survey would show that the levels of contamination for oysters are entirely too high for clams because of the physical structure and living habits of clams.

L. M. Fisher, Public Health Service sanitary engineer, reported that his agency plans to set up a research laboratory in the Northeast to investigate the clam contamination problem.

Lobster Rearing Experiment

A lobster rearing experiment which its sponsors hope may make a State rearing program unnecessary, was begun at Pine Point on June 26 by the Pine Point Cooperative Association, with the assistance of the Department of Sea and Shore Fisheries. Working on the assumption that good natural conditions are better than the best artificial arrangements, Association mem-



Clyde C. Taylor, left, and Frederick T. Baird, biologists formerly with U. S. Fish and Wildlife Service and recently employed by Maine Department of Sea and Shore Fisheries, as its first scientific staff. Located at the Boothbay Harbor rearing station and provided with a small research boat and laboratory, they will conduct investigations on lobsters, herring, scallops and groundfish. Their project is being financed by the one cent per gallon fishermen's gasoline tax.



The 62' dragger "Mary S" which is operated out of Boothbay Harbor, Me. by Capt. Roscoe Rand of West Southport, Me. She is powered by a 115 hp., D13000 Caterpillar Diesel with 2.5:1 reduction.

bers have penned a number of seed lobsters in a salt "pond" on nearby Stratton Island, where the lobsters can hatch out their young behind the protection of a ledge reef. Water, food, temperature and other tests will be made by Department personnel, in order that valuable information may be obtained for future studies along the same line.

A long-range experimental project to study artificially-reared baby lobsters after their release in Maine coastal waters was begun recently at Schoodic Point by the Department of Sea and Shore Fisheries in cooperation with the Fish and Wildlife Service. State and Federal biologists will observe closely the habits and activities of the young crustaceans in order that an intelligent and comprehensive program of lobster conservation and propagation may be worked out. The basis of the project will be the Harmon lobster pound recently leased by the two fisheries agencies, where fourth-stage lobsters from the Sea and Shore Fisheries rearing station at Boothbay Harbor will be liberated in large numbers under conditions as nearly natural as can be approximated.

Sardine Packing Underway

Most sardine packing plants in Eastern Washington County started packing operations on June 23, following the appearance of new schools of herring in the Quoddy area. Although the quantity of fish was not considered great, there was said to be a fair supply. The herring are coming from the Perry shore, Deer Island and Campobello.

Packing operations also started on the 23rd in Rockland's three plants, one of which, the Green Island Packing Co., is packing sardines for the first time. Bath Canning Co., Bath, which handled a short run early in March, resumed canning June 10.

Developing Crab Industry at Whiting

The crab, which has hitherto been considered a pest by Whiting lobstermen and whose number is legion in Eastern Maine coastal waters, has suddenly assumed an important role in the fishing industry of that town. Lobstermen in the Whiting area are now saving the crabs which invade their lobster pots, and some fishermen are building special crab traps, using one head and spacing the laths closer together than on a lobster pot. Crab production is expected to increase considerably when the new gear is put into commission.

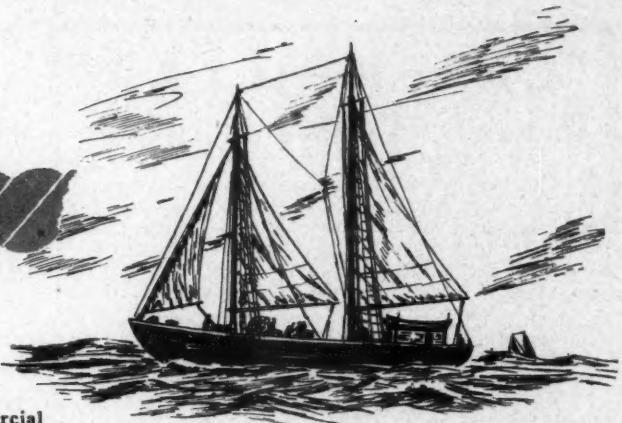
The East Machias Canning Co., which has been experimenting with the packing of crabmeat, pays fishermen 2 or 3c per crab.

Rockland Landings for June

Rockland fish landings for the month of June amounted to 3,977,515 lbs., with herring landings accounting for 607,040 lbs. of the total, and redfish making up the greater part of the remainder. The *Eugene H.*, with total landings of 303,357 lbs., was high-liner of the fleet, followed by the *Mary A.*, with 241,165 lbs., and the *Catherine and Mary*, 239,860 lbs.

The new 90' scalloper *Bright Star*, owned by Soffron Bros. of Ipswich, Mass., joined the Rockland fishing fleet during June. The vessel is skippered by Capt. Lew Wallace of Rockland, and carries a crew of 10, including the captain.

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pany, to make rope for their own vessels. So fine was the rope they made that it was soon sought by all the marine industries.

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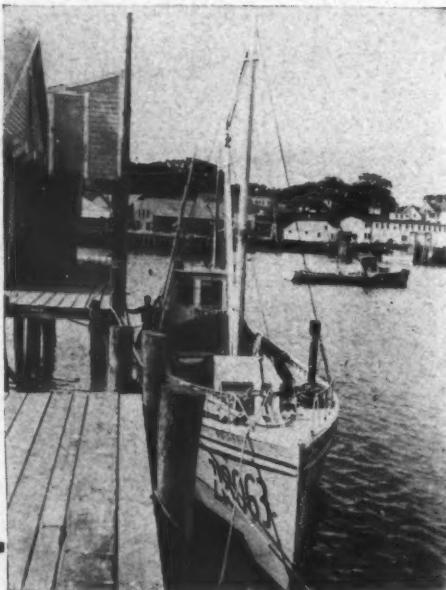
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North Carolina Shrimpers Making Good Catches

Shrimpers have made some excellent hauls on the central coast of North Carolina recently, following several months when catches were small. Some fishermen have been catching up to 1,000 lbs. per day, which at current prices gives them a gross of \$250. The best shrimp grounds during recent weeks have been in Onslow Bay, which is south of Atlantic Beach and Bogue Banks.

Southport shrimpers, who tied up their boats on June 24 in a cooperative action in the interest of preventing the destruction of undersized shrimp, reported that the crustaceans were running larger early in July, and that they expected to resume fishing by about July 7. A test haul taken on June 30 was comprised of shrimp running 75 to the pound, showing improvement over catches taken a week previous, when the shrimp were so small that more than 100 were required to make a pound. Not only is there no demand for these small shrimp, but a prohibitive labor cost is entailed in preparing them for market.

Fisheries Division Moves Offices

The Commercial Fisheries Division of the North Carolina Department of Conservation and Development completed the moving of its offices to new headquarters at the former Naval section base at Camp Glenn, Morehead City, on June 18. The base comprises about 60 acres with a Bogue Sound frontage of more than a quarter of a mile.

Additions to Menhaden Fleet

Two mine sweepers have been purchased from the War Surplus Administration by Southport residents, and are being converted to menhaden fishing. Owners of the mine sweepers are the Brunswick Navigation Co. and Mrs. Bess M. Plaxco. Two of the three boats now fishing for the Brunswick Navigation Co., the *Morehead* and the *Anderson*, also are War surplus craft.

Shrimp Ground Survey Underway

The North Carolina shrimp ground survey provided for in legislation introduced by Senator R. I. Mintz of Brunswick began about July 1 at the South Carolina line. During all of its operations the shrimp survey boat will have a fisherman aboard who is familiar with the territory in which the boat is working. The purpose of the survey is to locate and chart new fishing grounds on which shrimp may be taken without the tremendous loss in nets that has attended previous efforts to work in new waters.

Director R. Bruce Etheridge of the North Carolina Department of Conservation and Development has appointed a five-man commission to supervise the survey. Members of the Commission are as follows: W. S. Wells and L. J. Hardee, Southport; Dick Burnett, Wilmington; German Holland, Beaufort; and Garland Fulcher, Bayboro.

Several New Shrimpers Completed

The new 53' shrimp trawlers *Bill, Jr.* and *Claudia J.*, built by the Diesel Engine Sales Co., St. Augustine, Fla., joined the Southport fleet early in June. Owned by W. S. Wells, the craft are powered by self-starting Caterpillar Diesel engines. The two new shrimpers bring the total number of vessels in the Wells fleet to 9.

Capt. Thomas Bennett is skipper of the *Claudia J.*, while Billy Wells, 17-year-old son of W. S. Wells, is in command of the *Bill, Jr.*, being one of the youngest shrimp trawler skippers on the coast.

The 53' shrimp trawler *Sea Boy* was launched for Lewis Hardee of Southport the latter part of June. Built at Southport under the direction of Louis Spaulding of St. Augustine, Fla., the boat is of strong construction and was completed in about 3 months from the time the keel was laid. Five more shrimp boats, all identical with the one launched recently, are to be constructed by Spaulding.

The 62' shrimp trawler *Penny*, built for Capt. Merritt Moore of Southport by a St. Augustine, Fla. yard, arrived at Southport the latter part of June. The vessel was constructed according to plans of Capt. Moore, and will be operated by him.

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Clam Farming in Maritimes

(Continued from page 20)

well understood, but is thought to result from smothering under heavy ice lying on the beaches.

Little is known about the natural enemies of clams. Investigations are now in progress on the activities of the smooth whelk, a species of snail which is a serious enemy.

Conditions permitting rapid growth generally favor high survival and fat meats. Ground for clam farming should be selected to insure fast growth and that requires active water circulation, because clams depend on water currents to bring them their food. Circulation should be vigorous but the ground should not be exposed to wave action or to tidal currents to such an extent that the soil shifts seriously. Good growing grounds are not generally found near the heads of harbors or in small coves with narrow outlets. Growth is best at or near low-water mark and poor at high levels on the beach.

Sandy soils are preferable for planting. Mild rippling of the surface is not a dangerous sign but coarse, loose, shifting sand is unfavorable both to growth and survival. Gravel-mud combinations are often satisfactory. Soft muds, grounds with razor clams or tube-forming sand worms, or grounds covered with mussels, eel grass, or other sea weeds are to be avoided.

Most of the Fisheries Research Board's trial plantings have been made on the outer coast of Nova Scotia in intensively fished areas where there are signs of depletion. Encouraging results have been obtained in parts of Musquodoboit, Clam and Petpe- swick Harbors. Clam farming is hard work and does not seem to have get-rich-quick possibilities. Nevertheless, on the best grounds in the areas mentioned it appears that returns equivalent to good wages could be made by clam farming.

To get a return for his work the clam farmer must have control of the ground he develops. Policies which would make ground available for private clam farming without interference with the public fishery are under consideration. Clam farming trials are continuing and our understanding of the many problems involved is improving.

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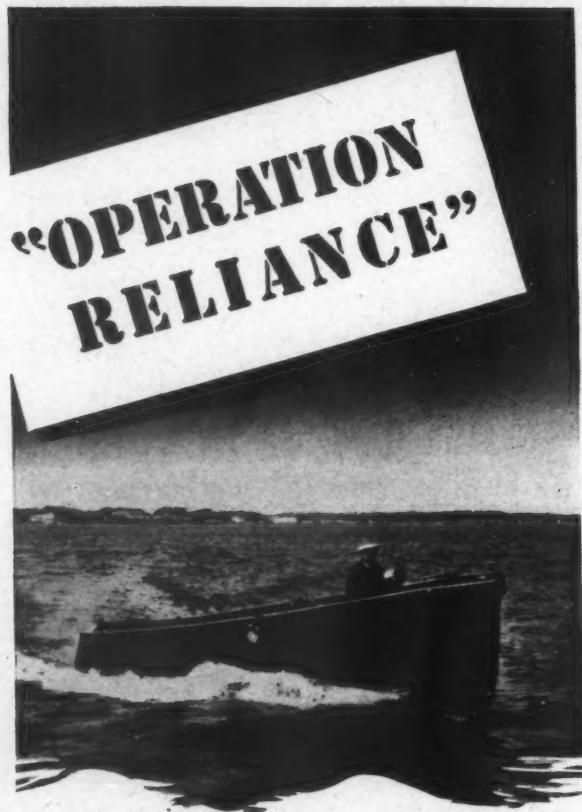
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●

Osco
MARINE ENGINES

Diesel Design and Operation

(Continued from page 15)

necting rods, an uneven or tapered crank pin journal producing too much bearing clearance on the crank pin, or too low oil pressure and supply. Crankshaft noises, also most noticeable when the engine is accelerating under load or idling, are generally dull but heavy metallic knocks, and may be detected in much the same way as connecting rod noises since the causes are similar.

Causes of Vibration

All four-cylinder Diesel engines develop more or less vibration at some particular speed between 300 and 400 revolutions per minute, but these can easily be overcome through by-passing the critical spot and operating at a different speed. Mechanical defects within or about the engine that may cause vibrations are an unstable engine bed, engine and propeller shaft out of alignment, an off-center coupling, crankshaft bent or unbalanced, misfiring, unequal compression in cylinders, a sprung propeller shaft, defective stuffing box, bent propeller, or a loose connection between crankshaft and flywheel.

The power strokes in the cylinders should balance throughout the entire engine to avoid vibrations and strains, which means that the fuel charging of the cylinders must be such that certain cylinders will draw in air, compress and exhaust, while other cylinders are firing. Thus in a four-cylinder engine the firing instead of being in direct order of the cylinders, 1, 2, 3, 4, may be in a sequence of first cylinder, third cylinder, fourth cylinder, second cylinder, to obtain the best balance, and the cranks set at 180° or at right angles.

Diesels Should Not Smoke

A Diesel engine burns a certain amount of fuel when mixed with a proper proportion of air, but when the proportions are such that there is not enough air for the fuel to burn clean, there is smoke. Never allow your engine to smoke; be sure the combustion is perfect and the exhaust clear.

Not only does perfect combustion depend upon the proper amount of fuel for the amount of air, but also upon the proper distribution of broken-up fuel in the combustion chamber. If the spray nozzle is out of order or partially clogged, the fuel may enter the combustion chamber in a solidified liquid form and so will not properly mix with the air in the cylinder. This is indicated when the exhaust from the engine is smoky. Smoke, the residue from imperfect combustion, clings to the oily surfaces of the cylinders, pistons, piston rings, valves and other inner parts of the engine on its way to the exhaust and gums up the works, preventing the engine from doing its duty in an efficient manner.

A modern Diesel engine is usually of such liberal dimensions that it will pull a considerable overload without smoking, but if it is overloaded too much it will naturally smoke. If more fuel is injected than the amount of air in the cylinder will support in combustion, the engine is being overfed and will smoke.

Lack of air may be due to the air cleaner being stopped up with dust or dirt from the air. The air cleaner automatically takes the dust or dirt from the air but the operator must take the dust or dirt from the cleaner and should use oil for the purpose, oil either of the same grade as that in the crankcase or in extremely cold weather a lighter grade may be necessary. The air injector plunger may be sticking and causing smoke, the spray holes dirty or the spray tip cracked, and the suction lines on the pump admitting air may leak.

The color of the smoke from the exhaust is an indication of where the smoke trouble may be. If it is blue, lubricating oil may be entering the combustion chamber through worn or stuck piston rings. Leaky blower shaft seals may allow oil to enter the air box or blower housing, and improperly equalized injectors or a cylinder that is missing fire may cause blue smoke.

If the smoke is black, look for a late timing fuel injector, check up on the injector spray, and suspect a poor grade of fuel. Be sure the air box drain is open, clean air ports in the cylinder lines if necessary, examine the air box cover plate gasket which may be ruptured, clean the screen between air intake housing and blower. These or a high back pressure at the exhaust manifold may be responsible for black smoke.



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Monel valve discs, seats, and stems are readily made by any good marine machine shop. They can produce pump rods...whistle parts...deck-winch and windlass parts...emergency bolt replacements. Your local sheet metal shop can replace dingy galley counter tops and trim with shining, easy-to-clean Monel.

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"Ellen & Roy" Built by Clossen

The 54' x 16' x 6' *Ellen & Roy*, designed, built and operated by Elmer Clossen of Ellsworth was recently placed in service. While her present service is towing, the boat is designed for easy conversion to a dragger with fish hold space available between the engine room and fo'c'sle. Clossen has a contract with St. Regis Paper Co. of Bucksport for whom he expects to move 12,000 cords of wood in towing barges this Summer.

The boat is powered with a D13000 115 hp. Caterpillar Diesel sold by Southworth Machine Co., Portland, which turns a 44 x 33 Columbian propeller on a 2½" Monel shaft through 2:1 Joes reduction gear.

A good sea boat with ability to maneuver around small waterways, the *Ellen & Roy* is constructed with 2" x 4" steam bent oak frames on 12" centers, 3" x 6" dual bilge stringers and 1½" cedar planking, and has sharp risers over the regular floor timbers. She has 4 bunks below and one in the pilothouse, and is equipped with Shipmate range and Kelvin-White compass. She carries 500 gallons of fuel oil in 2 tanks.



Installing the D13000 Caterpillar Diesel in the 54' "Ellen & Roy" owned by Elmer Clossen, Ellsworth, Me.

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Connecticut Oyster Survey

An examination made on July 1 of conditions at the oyster sampling stations in Long Island Sound of the Milford Fish & Wildlife Service Laboratory showed that the majority of the oysters in the area were ripe or approaching ripeness. Partially spawned oysters were found in the New Haven and Milford areas, and the oysters of the Bridgeport area were nearing spawning condition, but no partially discharged gonads were found.

A small number of starfish was encountered in the samples taken at some of the stations, and examination showed that a moderate amount of them already have released large quantities of spawn.

Judging by the number of drill egg cases found in the samples collected at Station 6, which is in the New Haven section north of Luddington Rock Breakwater, the drill population of that area is extremely numerous.

"Hunkie Jane" Joins Stonington Fleet

The 28' combination lobster boat and dragger *Hunkie Jane* recently joined the Stonington fleet. Purchased this Spring by Capt. Joseph Fretard, the boat was formerly the *Kathleen*. She was refastened, recaulked and repowered with a used 4 cylinder, 40 hp. Gray engine by Stonington Boat Works.

Goes 25 Miles in Dory

Lost 75 miles southeast of Block Island, R. I. recently when fog shut down between his dory and the dragger *Black Hawk*, crew member Emile Cote of Mystic managed to reach Nantucket Lightship, a distance of 25 miles. Cote reported that he set a course of dead reckoning, sailing when there was a wind and rowing when it was calm. The *Black Hawk*, which is skippered by Grover Eldridge, operates out of Mystic.

"Dragger-Artist"

The July 19 issue of *Liberty* carried an illustrated article entitled "Dragger-Artist", which is about Capt. Ellery F. Thompson of New London, who in addition to being captain and owner of the 50' dragger *Eleanor*, is a marine artist, trumpet player and fishing vessel designer. The story states that Capt. Thompson knows so much about the habits of the fish he catches that Yale's top oceanographers regularly sail with him out of Stonington to get the benefit of his knowledge. Capt. Thompson, who is now writing a history about Connecticut fishermen, with his own illustrations, averages 130 days' fishing a year, and sells 350,000 lbs. of fish to Fulton Market in New York.

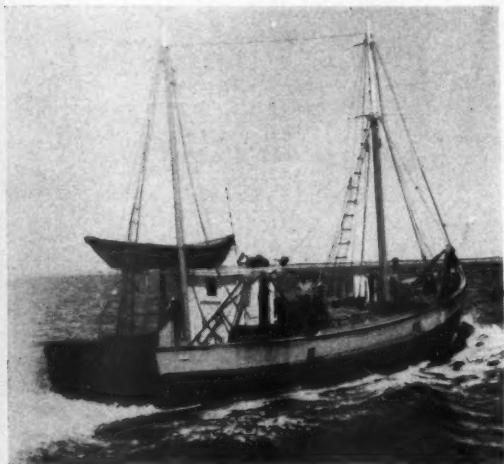
Rhode Island Oyster Boat Sinks

The 81' oyster boat *Florence*, one of a fleet owned by the Blount Seafood Corp., of Warren, R. I., sank in the waters of Long Island Sound on June 22. Capt. Frank Cygnowski of Warren and William Dickerson of W. Barrington, who were aboard the craft, escaped in an 18' dory, and were rescued by a Coast Guard craft.

Applies for Oyster Ground

Adrian V. Coutanche of Warren recently applied for about 80 acres of oyster ground in Narragansett Bay, located as follows: lying south of Barrington Beach, northeast side of channel between buoys 28 and 30, southwest line of bed to be approximately 750 yards northeast of channel located on section 38 on chart of leased oyster ground.

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Fish Landings for Month of June

(Hailing fares. Figure after name indicates number of trips.)

Portland

Al & M (1)	3,000	Fannie Belle (3)	63,000
Alice M. Doughty (3)	188,000	Gypsy (3)	6,000
Andarte (2)	13,000	Jackie B. (1)	18,000
Annie Louise (3)	49,000	L. Davis (1)	16,000
Arthur D. (4)	25,000	Mary & Helen (9)	111,000
Carolyn & Priscilla (1)	36,000	Nora D. Sawyer (6)	66,000
Cecil W. (1)	41,000	Onward (2)	17,000
Claire Hodkins (1)	70,000	Richard J. Nunan (4)	275,000
Dorothy & Ethel II (7)	286,000	St. Christopher (1)	100,000
Dorothy & Ethel III (2)	106,000	St. Michael (1)	21,000
Elinor & Jean (3)	69,000	Silver Bay (2)	162,000
Evelina (3)	297,000	South Sea (1)	70,000
Evaneade (1)	3,000	Willard Daggett (3)	89,000
Ezzone (3)	210,000		

Gloucester

Agnes & Myrnie (2)	44,000	Killarney (1)	90,000
Alphonso (1)	6,000	Lassgehn (1)	10,000
Alvan T. Fuller (1)	94,000	Leonard (1)	4,000
America (3)	110,000	Leonard & Nancy (2)	98,000
American Eagle (2)	86,500	Leretha (2)	155,000
Angie & Florence (2)	25,000	Linta (4)	165,000
Anna Guarino (2)	25,500	Lois T. (4)	6,000
Annie (6)	52,900	Lorine III (2)	106,000
Annie II (1)	12,700	Lucretia (6)	46,000
Anthony & Josephine (5)	59,700	Madame X (4)	51,500
Ariel (4)	55,000	Madeline (2)	26,000
Atlantic (1)	64,000	Madonna (2)	85,000
Austin W. (2)	94,500	Malolo (1)	85,000
Ave Maria (Small) (4)	43,900	Manuel F. Roderick (1)	104,000
Ave Maria (2)	121,700	Manuel P. Domingos (1)	120,000
Babe Sears (1)	80,000	Margie & Roy (2)	12,000
Baby Doll (3)	35,000	Maria Immaculata (4)	44,400
Baby Rose (2)	186,000	Marietta & Mary (3)	134,000
Barbara C. (3)	38,000	Marjorie (1)	64,000
Barbara C. Angell (1)	56,000	Marsala (2)	73,300
Beatrice & Rose (2)	80,000	Mary (6)	83,000
Benjamin C. (2)	219,000	Mary & Joseph (2)	119,000
Bethulia (3)	113,000	Mary Curtis (1)	49,000
Beth & Jack (1)	68,000	Mary E. (4)	51,500
Bonaventure (2)	136,000	Mary Rose (2)	168,000
California (3)	179,000	Mary W. (1)	62,000
Capt. Drum (4)	179,000	Mocking Bird (2)	183,000
Carthensul (3)	22,000	Nancy F. (2)	58,500
Carlo & Vince (4)	130,000	Naomi Bruce (7)	12,100
Carolina & Mary (1)	143,000	Naomi Bruce II (7)	11,900
Caso (2)	19,600	Natalie B. (1)	19,000
Catherine (3)	6,000	Natalie III (2)	122,000
Catherine Amirault (1)	108,000	No More (4)	45,000
Catherine B. (2)	157,000	North Sea (2)	100,000
Cecil W. (1)	67,000	North Star (2)	68,000
Chanco (1)	78,000	Nova Antonio (3)	10,800
Chebeague (3)	57,300	Nyoda (4)	118,000
Cigar Joe (2)	94,000	Ocean Breeze (1)	63,000
Columbia (1)	100,000	Olga C. (2)	147,500
Conquest (1)	110,000	Olympia (1)	60,000
Corinthian (1)	95,000	Pauline M. Boland (1)	45,000
Curlew (1)	100,000	Philip & Grace (2)	166,000
Dartmouth (2)	155,000	Phyllis A. (4)	6,200
Dolphin (2)	159,000	Phyllis & Mary (3)	104,000
Dorothy (1)	12,000	Pilgrim (1)	49,000
Edit & Lilian (1)	120,000	P. K. Hunt (1)	73,000
Edna Fae (7)	12,800	Pollyanna (1)	90,000
Eleanor (4)	220,000	Prosperity (4)	44,200
Eliza C. Riggs (4)	43,800	Puritan (1)	112,000
Emily Brown (1)	135,000	Raymond (1)	47,500
Enterprise (2)	27,700	R. Eugene Ashley (2)	149,000
Eva M. Martin (1)	4,000	Rita B. (1)	85,000
Evelyna A. (1)	4,500	Rosalie D. Morse (1)	80,000
Falcon (4)	33,800	Rose and Lucy (1)	60,000
Famiglia (1)	19,300	Rosemarie (4)	104,000
Florence & Lee (1)	72,500	Rosemarie V. (3)	126,000
Frances R. (4)	149,500	Rosie (1)	15,000
Frank F. Grinnell (1)	50,000	Rosie and Gracie (5)	232,000
Frankie & Rose (2)	97,000	Rosie C. (2)	17,500
Fred Henry (2)	35,200	St. Anthony (1)	70,000
Gaetano S. (2)	81,500	St. Christopher (1)	109,000
Gertrude E. (1)	8,000	St. Joseph (1)	10,000
Gloucester (2)	82,000	St. Nicholas (2)	120,000
G. N. Saffron (1)	60,000	St. Providencia (5)	67,500
Gov. Al Smith (2)	108,000	St. Victoria (3)	283,000
Helen M. (2)	85,500	Salvatore (2)	141,000
Hilda Garston (1)	147,000	Santa Maria (3)	124,000
Holy Family (1)	89,000	Santina D. (1)	2,000
Ida & Joseph (2)	85,000	Santo Antonino (2)	90,000
Immaculate Conception (1)	56,000	Schoodic (1)	2,600
Irma Pauline (1)	62,000	Sea Hawk (2)	146,000
Irma Virginia (4)	57,500	Sea Queen (1)	72,000
Isaac Foss (1)	51,000	Sebastian C. (2)	70,000
Jackson & Arthur (5)	20,000	Serafina N. (4)	221,000
Jane Carolyn (1)	58,400	Serafina II (3)	93,800
J. B. Junior (4)	54,000	Silver Bay (1)	94,000
J. B. Junior II (1)	52,500	Skillinge (2)	80,500
Jean & Patricia (5)	16,500	South Sea (3)	208,000
Jennie & Lucia (2)	193,000	Superior (1)	73,000
Johnny Baby (4)	112,000	Theresa M. Boudreau (1)	105,000
Joseph & Lucia (2)	36,500	Thos. J. Carroll (1)	104,500
Josephine & Margaret (3)	126,500	Three Sisters (1)	52,000
Joseph S. Mattos (2)	165,000	Tina B. (2)	175,000
Josie II (3)	40,000	Trimberlawn (5)	56,800
Julie Ann (2)	126,000	Uncle Guy (3)	141,000
		Uncle John (1)	40,000

Voyager (1)	50,000	Whitestone (3)	157,000
Waverly (1)	4,300	Wind (2)	183,000
We Three (4)	52,500	Yankee (1)	57,000

Boston

Acme (8)	107,300	Maine (2)	121,300
Addie Mae (8)	111,800	Margaret & Marie (5)	71,200
Adventure (1)	87,000	Margee & Pat II (2)	151,900
Albatross (2)	80,900	Maria del Soccorra (6)	77,500
Alden (7)	338,000	Maria Giuseppe (4)	15,100
Aloha (1)	60,000	Mariestella (2)	115,800
Alphonso (6)	76,800	Marjorie (4)	168,000
Angie & Florence (2)	100,000	Marjorie Parker (1)	23,000
Arlington (3)	105,600	Marsala (1)	59,600
Atlantic (3)	212,000	Mary and Jennie (7)	102,500
Ave Maria (7)	197,500	Mary & Joan (1)	61,500
Bay (3)	97,900	Mary & Joseph (2)	90,000
Beatrice & Rose (3)	184,100	Mary J. Hayes (2)	105,300
Bethulia (3)	107,000	Mary M. (1)	18,400
Bettulia (3)	172,000	Mary W. (3)	152,000
Bettina (2)	71,000	M. C. Ballard (2)	120,000
Billow (1)	69,000	Michael G. (7)	89,900
Bonnie (3)	314,000	Nancy B. (2)	32,200
Breaker (2)	173,700	Naomi Bruce III (5)	218,000
Breeze (2)	176,000	Natalie III (4)	199,000
Brookline (2)	100,200	Neptune (2)	133,500
California (3)	120,000	Newton (3)	249,200
Calm (2)	193,400	Nina B. (2)	168,000
Cambridge (3)	255,500	North Star (3)	170,000
Cape Cod (5)	90,500	Nyoda (1)	25,000
Capt. Drum (1)	57,000	Pioneer (6)	69,500
Carl Henry (1)	56,000	Plymouth (3)	294,900
Carmela Maria (Dragger) (3)	75,500	Princess (8)	39,100
Carmela Maria (L. Trawler) (2)	24,500	Olympia (5)	184,000
Carole June (1)	171,000	Olympia LaRosa (5)	133,800
Caroline & Mary (1)	51,000	Pan Trades Andros (2)	123,500
Catherine B. (Dragger) (1)	5,800	Paulina (1)	2,300
Challenge (3)	297,900	Pauline H. (3)	171,000
Chas. M. Fauci, Jr. (2)	114,300	Pilhasca (3)	46,800
Charlotte M. (2)	117,000	Pioneer (6)	69,500
Clipper (1)	47,800	Plymouth (3)	181,700
Columbia (1)	64,000	Princess (8)	116,500
Cormorant (3)	263,900	Quincy (3)	236,100
Crest (2)	201,400	Rainbow (2)	44,600
Delaware (4)	352,000	Red Jacket (1)	100,300
Diana A. (1)	66,000	Reneva (6)	90,200
Diana C. (3)	41,600	Robert & Edwin (5)	64,800
Dorchester (3)	273,500	Roma (8)	113,800
Dorothy (3)	24,400	Romerly (1)	13,000
Drift (2)	218,000	Ronald & Mary Jane (2)	114,500
Eddie & Lulu M. (8)	104,300	Rose & Lucy (3)	90,000
Elizabeth B. (2)	135,900	Rosemarie (1)*	52,000
Emilia R. (1)	12,000	Rosemarie M. (2)	97,500
Esther M. (2)	143,000	Rose Mary (1)	11,700
Estrela (1)	90,800	Rosie (8)	125,000
Ethel (4)	40,700	Rush (3)	210,900
Eva M. Martin (6)	56,600	St. Anna (2)	10,900
Eva II (7)	86,100	St. George (1)	86,300
Fabia (2)	186,000	St. Joseph (Dragger) (1)	36,000
Familgia (2)	27,000	St. Joseph (L. Trawler) (3)	18,400
Fannie F. Hickey (3)	35,600	St. Michael (1)	800
Fearless (3)	302,200	St. Michael Angelo (7)	32,000
Flow (1)	65,200	St. Rita (1)	7,400
Flying Cloud (2)	197,600	St. Theressa (4)	14,200
4-E-885 (3)	5,000	Salvator (6)	100,000
4-G-370 (2)	9,500	San Calogero (8)	126,300
4-G-673 (3)	7,700	Santa Anna (1)	6,200
Francesca (3)	22,800	Santa Lucia (6)	83,900
Frank F. Grinnell (5)	254,000	Santa Maria (2)	109,000
Frankie & Rose (1)	15,000	Santina D. (2)	20,400
Geraldine & Phyllis (2)	78,500	Sarah M. (5)	32,500
Gertrude DeCosta (1)	25,000	Savoia (1)	4,200
Gudrun (1)	90,000	Sea Fox (2)	48,500
Hazel B. (2)	82,400	Sebastiana & Figli (5)	74,300
Ida & Joseph (3)	172,000	Six Brothers II (5)	22,800
Immaculate Conception (5)	180,000	Sixtig J. (1)	60,500
Jacinta (1)	50,700	Soleig (2)	30,400
Jackie B. (6)	341,000	Squara (2)	257,100
J. B. Junior (1)	53,500	Stanley B. Butler (1)	64,500
J. B. Junior II (7)	80,500	Storm (2)	211,500
Jean & Patricia (1)	55,000	Surf (2)	307,800
Joe D'Ambrosio (6)	68,600	Surge (2)	202,700
John David (1)	18,800	Theresa R. (2)	87,500
John G. Murley (1)	50,500	Thomas D. (3)	81,100
Josephine Ess (3)	224,100	Thomas J. Carroll (1)	60,000
Josephine F. (5)	30,400	Thomas Whalen (3)	236,900
Josephine P. II (4)	105,300	Three of Us (3)	55,200
Josie M. (6)	87,800	Three Sisters (2)	111,000
Katie D. (2)	102,600	Tide (3)	277,400
Lark (3)	260,900	Triton (3)	232,000
Leonarda (6)	76,900	Two Pals (8)	103,300
Liberty II (4)	70,700	Venture II (2)	107,500
Linta (3)	171,000	Victory II (5)	86,100
Little Nancy (4)	92,100	Viking (1)	56,800
Lorine III (1)	28,800	Weymouth (3)	250,400
Louise (3)	116,700	Wm. J. O'Brien (3)	270,700
Lucky Star (2)	140,500	Winthrop (3)	212,000
Lynn (3)	227,000	Yankee (5)	146,900
Mabel Mae (2)	111,600		
Madonna (1)	53,000		

Scallop Draggers (Landings in Gallons)

Antonina (2)	2,000	Viking (1)	1,000
Louis A. Thebaud (1)	1,000		



COULD YOU SELL more fish?



Of course you can sell all the fish you can catch. But fish don't come to you,

you have to go after them and the more time you have for fishing the more fish you have to sell. That is why INTERNATIONAL BOTTOM PAINTS are so popular with fishermen. These paints are most effective against bottom growth of all kinds. That means faster trips to and from the grounds. They are more durable so require less waste-of-time for repainting. Use INTERNATIONAL BOTTOM PAINTS and you will sell more fish. Send for color cards.

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Montreal, Quebec Vancouver, B.C.
6700 Park Avenue 101 Powell Street

AGENTS IN EVERY IMPORTANT PORT

New Bedford

Adele K. (2)	54,500	Janet Elise (2)	25,000
Adventurer (5)	163,000	J. Henry Smith (3)	25,900
Alert (4)	42,200	Joan & Ursula (4)	143,300
Alice May (2)	10,600	Johnnie Ryan (1)	12,000
Aloha (2)	42,500	Johnny Boy (1)	1,900
Alva (3)	22,900	Josephine & Mary (2)	78,100
America (3)	32,300	Lt. Thomas Minor (2)	31,300
Angeline (1)	4,000	Lisbon (1)	13,400
Anna C. Perry (3)	73,100	Little Chief (4)	38,400
Ann & Marie (3)	35,100	Little Lady (3)	20,300
Anne Silvia (5)	55,300	Lucky (3)	28,900
Annie Louise (4)	59,300	Lucy M. (4)	36,900
Annie M. Jackson (4)	84,200	Madeline (4)	61,700
Baby II (1)	13,500	Madonna (1)	40,000
Barracuda (4)	56,800	Marg-E (4)	38,100
Bernice (3)	18,000	Margie (1)	27,000
Bethlehem (1)	6,600	Maria Julia (4)	56,900
Betty Boop (1)	11,700	Marion M. (3)	28,300
Bonnie (3)	15,100	Mary & Joan (1)	23,500
Bozo (2)	12,100	Mary & Joseph (1)	40,000
California (1)	32,000	Mary W. (1)	25,000
Cape Cod (1)	14,800	Mildred & Myra (4)	42,600
Capt. Drum (2)	85,000	Min Flicka (1)	11,300
Carlannsul (1)	6,000	Minnie V. (1)	21,100
Carl Henry (2)	114,500	Mishau (3)	20,200
Carl J. (4)	50,900	Molly and Jane (4)	89,900
Carlo & Vince (2)	70,000	Morning Star (3)	24,000
Carol & Dennis (4)	55,400	Nancy S. (4)	36,600
Caroline & Gary (3)	39,200	Nashawena (3)	29,800
Charles E. Beckman (5)	91,500	Natator (1)	2,000
Clara T. (2)	13,300	Nellie (4)	34,400
Clifton (2)	18,300	New England (3)	36,800
Clinton (4)	72,100	Noah A. (2)	25,000
Clipper (1)	50,300	Novelty (1)	8,000
Conquest (1)	10,700	Ocean Wave (1)	72,500
Diana A. (2)	111,500	Palmers Island (3)	22,200
Dolphin (1)	79,000	Papoose (2)	26,300
Doris (4)	36,600	Penguin (4)	119,100
Dorothy (1)	9,200	Petrel (1)	3,100
Dorothy & Betty (2)	12,900	Phoebe-T (2)	13,600
Driftwood (3)	19,200	Phyllis J. (1)	9,800
Ebeneezer (2)	10,400	Pilhasca (1)	3,000
Edith (2)	37,500	Polly N. (1)	47,700
Eleanor (2)	85,000	Portugal (4)	74,500
Erena (3)	14,400	Priscilla (6)	43,000
Elva (4)	15,900	Pvt. Frank Kessler (4)	2,000
Elva & Estelle (3)	85,300	Quest (1)	24,000
Elva L. Beale (1)	15,900	Rita (2)	38,300
Emma Marie (1)	12,600	Ronald & Dorothy (2)	66,000
Etta K. (3)	50,500	Ronald & Mary Jane (1)	91,000
Eugene & Rose (3)	57,000	Rose & Lucy (2)	7,100
Fairweather (4)	48,700	Rose Jarvis (1)	74,000
Fannie Parnell (1)	5,100	Rosemarie (Seiner) (2)	18,200
Five Sisters (2)	18,000	Rosemarie (2)	20,000
Frances (2)	12,900	Rosie & Gracie (1)	40,800
Frankie & Rose (3)	121,000	Rosie II (3)	48,000
Gannet (2)	111,300	Russell S. (3)	56,000
Gertrude D. (2)	41,700	St. Joseph (2)	13,000
Gladys & Mary (2)	96,000	Sandra & Jean (1)	30,000
Gloamster (1)	47,000	Santa Maria (1)	10,100
Grayline (4)	27,000	Santina (1)	10,500
Harold Bruce (1)	11,400	Sea Prince (3)	72,000
Hazel S. (3)	25,000	Serafina N. (2)	19,000
Heedja (2)	19,000	Shirley & Roland (1)	46,600
Helen Mae (1)	3,400	S. M. Murtoza (3)	59,500
Hope (5)	117,400	Solveig J. (1)	27,700
Ida & Joseph (1)	35,000	Southern Cross (2)	55,200
Idlewild II (2)	12,800	Stanley B. Butler (1)	45,100
Immaculate Conception (1)	16,000	Susie O. Carver (3)	30,500
Invader (3)	43,800	Three Pals (3)	16,000
Irene (1)	19,500	Three Sisters (1)	13,000
Irene & Walter (5)	53,400	Tip Top (1)	12,500
Ivanhoe (2)	69,600	Trio (1)	91,800
Jacinta (1)	29,100	Two Brothers (5)	23,100
Jackie B. (1)	52,000	Two Brothers (Conn.) (2)	90,000
Jane & Lorraine (1)	11,700	Uncle John (2)	

(Continued on next page)

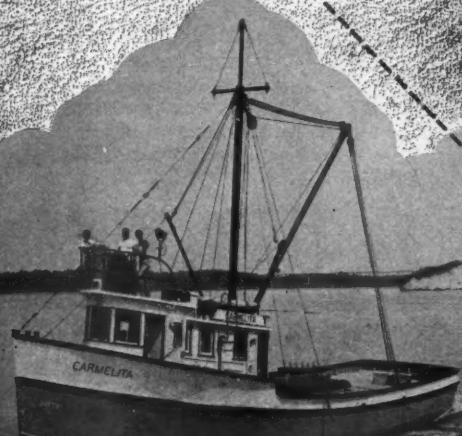


Employees of Perkins-Eaton Machinery Co., Boston, aboard the 60' party fishing boat "Victor Johnson" on a recent outing at New Bedford, Mass. Formerly the Bendix Marine Laboratory testing ship, the craft was refitted by her present owner, Capt. John Salvadore, and repowered with a D13000, 115 hp Caterpillar Diesel with 42x33 propeller for a 9 knot speed.

JULY, 1947

41

SHRIMP 'n TUNA



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AVONDALE BUILDS 'EM ALL

And we can build YOUR steel, sea-going fishing vessel to meet YOUR particular needs.

AVONDALE MARINE WAYS, INC. STEEL

RIVER FRONT, NEW ORLEANS DISTRICT
TELEPHONES: WALNUT 7776—CHESTNUT 5476
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MAIN PLANT: AVONDALE, LA.
QUICK REPAIR PLANT: HARVEY, LA.

Verjoy (1)	4,000	Whaler (3)	163,100
Viking (3)	55,400	Wild Duck (2)	110,800
Viking (Chilmark) (2)	18,600	William Chesebrough (3)	42,700
Wamsutter (3)	157,000	Yankee (1)	50,000
Wanderer (2)	20,300	Yankee II (2)	24,800
Scallop Draggers (Landings in Gallons)			
Abram H. (1)	1,000	Marie & Katherine (3)	3,000
Acushnet (3)	2,950	Marta E. Murley (2)	2,000
Agda (1)	1,000	Mary (2)	1,750
Alpar (3)	3,000	Mary Canas (2)	2,000
Antonina (1)	1,000	Mary D'Eon (2)	2,000
Arnold (3)	2,125	Mary J. Landry (3)	3,000
Arthur L. (1)	1,000	Mary R. Mullins (2)	2,000
Barbara (2)	1,800	Mary Tapper (3)	3,000
Bobby & Harvey (2)	2,000	Moonlight (2)	2,000
Camden (3)	2,500	Muriel & Russell (2)	1,400
Captain I (2)	2,000	New Dawn (2)	1,750
Carol & Estelle (3)	3,000	Newfoundland (2)	2,000
Catherine & Mary (2)	2,000	Norseman (2)	2,000
Catherine C. (2)	2,000	Olive M. Williams (2)	2,000
Christina J. (2)	2,000	Palestine (2)	2,000
Dagny (2)	2,000	Pearl Harbor (2)	2,000
Doris Gertrude (1)	200	Pelican (3)	3,000
Endeavor (2)	250	Porpoise (3)	2,350
Eunice-Lilian (2)	1,950	Rainbow (2)	1,900
Fairhaven (2)	2,000	Ramona (2)	1,800
Flamingo (3)	3,000	Rosalie F. (1)	1,000
Four Sisters (2)	2,000	R. W. Griffin, Jr. (3)	3,000
Francis J. Manta (1)	1,000	St. Anthony (2)	1,800
Freddie & Matthew (2)	1,400	Sankaty Head (1)	260
Friendship (4)	4,000	Sea Hawk (2)	2,000
Gloria F. (1)	1,000	Sea Ranger (2)	2,000
Growler (1)	1,000	Shannon (2)	2,000
Irene & Mary (1)	1,000	Sister Alice (2)	1,700
Jane & Jean (3)	3,000	S #31 (2)	2,000
Julie K. (1)	600	Snapee (1)	1,000
Kelbarsam (2)	1,650	The Friars (2)	2,000
Kingfisher (3)	3,000	Ursula M. Norton (2)	2,000
Liborio C. (2)	2,000	Venture I (2)	1,850
Linus S. Eldridge (2)	2,000	Viking (2)	2,000
Lubenray (3)	3,000	Virginia & Joan (2)	2,000
Malvina B. (3)	2,300	W.M. J. Landry (3)	2,400
Maridor (1)	1,000		

New York

Amelia (2)	98,000	Johnnie Ryan (1)	13,000
Black Hawk (2)	23,000	Katie D. (1)	32,000
Felicia (2)	104,500	Mary Anne (2)	77,000
John G. Murley (2)	100,000	Theresa & Jean (3)	161,000
Scallop Draggers (Landings in Gallons)			
Antonina (1)	799	Mary (1)	1,000
Buzz & Billy (1)	1,000	Norland (1)	485
Catherine C. (1)	1,000	Norseman (1)	1,000
Doris Gertrude (1)	950	Peerless (2)	1,080
Florence B. (1)	1,000	Rosalie F. (1)	1,000
Friendship (1)	900	Whaling City (2)	2,000
Gloria F. (1)	1,000		

Gets You Back Quicker...

EXPRESS SIX 330

BACK WHILE THE FISH ARE STILL FLOATING.

Massive, powerful, as good as it looks, the Gray Express Six-330 continues its popularity in the fishing fleets. It's solid. Note these prime features: sturdy 6-cylinder construction, seven main bearings of cadmium-nickel alloy, individual porting, water between all cylinders, 20-ampere generator, oversize clutch, gear-driven water pump with synthetic rubber impellers, thermostatic temperature control, piston displacement 330 cubic inches, 121 h.p. at 3200 rpm. And if you want still more power, look at the new Express Six-427, identical in design, only bigger.



GRAY

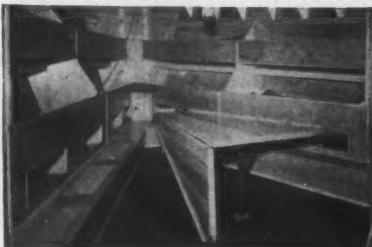
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SAILING
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Illustrated Catalog

GRAY MARINE MOTOR CO.
DETROIT 7, MICHIGAN



FASTER ... 400 h.p. Diesel produces speed of more than 10 knots.



BETTER ACCOMMODATIONS ... Extra-comfortable quarters are provided, with plenty of air, light and headroom.



BIGGER CAPACITY ... Large cork insulated, wood sheathed hold readily accommodates 180,000 to 200,000 pounds of fish.



MAXIMUM DEPENDABILITY ... Efficient power plants achieve new high in operating dependability, new low in maintenance costs.

E·B·Co**STEEL TRAWLERS**

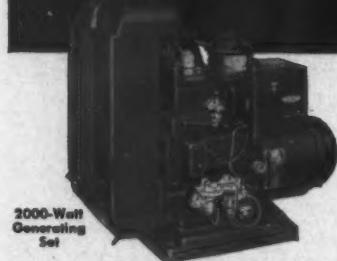
set new standards in speed, comfort, efficiency

It's a fact! Never before have trawlers of this size (95 feet) provided such speed, such comfortable quarters, such operating dependability and economy. Staunchly built with all-welded hulls, the new E. B. Co craft possess super strength and ruggedness. Their large holds accommodate 180,000 to 200,000 pounds of fish. Latest devices for safety and efficiency include radio direction finder, radio telephone and fathometer. Write today for complete information.

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GROTON, CONNECTICUT

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PERFORMANCE-PROVED to meet your requirements. Capacities, 350 to 35,000 watts. Compact, single-unit design, sturdy construction. Give unfailing service even under continuous, heavy-duty operation. A.C. and D.C.-types, remote and automatic start. Send coupon for FREE literature today!

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OYSTER AND CLAM KNIVES AND TONGS

Equipment and Supply Trade News

Additional information, and copies of catalogs and booklets mentioned, may be obtained on request from the addresses listed in the items or by writing Atlantic Fisherman, Goffstown, N. H.

Jefferson-Travis Offers Small Phone

Robert C. Berner, president of Jefferson-Travis, Inc., 380 Second Ave., New York 10, N. Y., recently announced a new marine radiotelephone. Designed for small boats, the Model 52, five watt radiotelephone operates from a self-contained, portable and rechargeable power supply housed in the same compact unit as the transmitter-receiver.

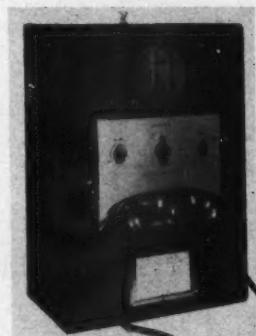
Any available 110 volt AC socket may be used for recharging this removable battery with built-in charger. If desired, this may be done without removal from the radiotelephone unit. This eliminates the need for installing and maintaining batteries and cables.

With an operating range of 30 to 50 miles this new model uses two channels and has a frequency range of 2 to 3 MC. The dimensions of the unit are 10½" wide x 7½" deep x 13" high.

Another new and compact radiotelephone has been designed by Jefferson-Travis to meet the requirements of fishing boats which have need for long range communications. It is Model 351, a 35 watt, five channel unit for 12 or 32 volt DC operation, crystal controlled in both transmitting and receiving and covering the complete marine band with a range of 90-175 miles.

An exclusive feature of the set is a specially designed internal power supply which reduces the standby drain to a minimum, affording a considerable saving in battery consumption. The entire unit is housed in a sturdy, steel cabinet measuring 21" high x 15½" wide x 10" deep.

Jefferson-Travis also has announced the appointment of Woodward, Wight & Co., Ltd., New Orleans, La. and Empire Dock & Boat Co., Inc., Corpus Christi, Tex. as radiotelephone distributors to service the dealers in their territories with Jefferson-Travis radiotelephones and other equipment.



Jefferson-Travis Model 351 radiotelephone.

that the gasoline contains no cracked materials which could contribute to sticking of valves or varnish formation and that it will not form gum in copper tanks or fuel lines no matter how long stored.

George Toth Joins Sheppard Diesel

George Toth, previously district sales engineer for Socony Vacuum Oil Co. in North and South Carolina, has joined the sales staff of R. H. Sheppard Co., Inc., manufacturers of Sheppard Diesel engines. Toth has been assigned to the southern sales territory covered formerly by Ed MacFarland who will be transferred to the eastern and New England area.

Mackay Opens Galveston Station

A powerful marine coastal radiotelegraph station has been opened for commercial use at Galveston, Texas, by the Marine Division of Mackay Radio and Telegraph Co. Operating on the call letters KLC, the new station is tentatively on intermediate frequencies with a power output of 5000 watts. It is scheduled for high frequency operation pending the necessary authorization by the Federal Communications Commission.

Incorporating many new features in equipment and antenna design, the Galveston station is the first to be operated by the Company in the Gulf area. Atlantic Coast Mackay stations are located at Thomaston, Me.; Amagansett, N. Y.; New York City; and Jupiter, Fla.



A party of sports fishermen with their catch of mackerel after a day of fishing out of Brielle, N. J. Extreme left, John W. Johnson, president of Pettit Paint Co.; extreme right, John L. Pettit, chairman of the board of directors, Pettit Paint Co.; and center, Capt. Charles Freiberger, operator of the Brielle Yacht Basin.

Sperry Radar Improvement Revealed

Electronically magnified images soon will increase the value of marine radar in piloting ships through fog-bound, heavily-traveled waterways. Developed to save hours of running time, the new radar technique recently was revealed by Sperry Gyroscope Co., Great Neck, N. Y. It is a short range scale that spreads out the map-like picture on the radar scope to a scale larger than five inches equals one mile, large enough to make a liberty ship appear one-half inch long on the scope. This improvement is being incorporated in all Sperry production radars.

Size of the picture is more than doubled without increasing the physical size of the radar scope. The expanded picture seen on a 12" diameter screen gives better definition to objects. It enables pilots to recognize clearly piers, bridge bulkheads, and close-together marker buoys.

This enlarged presentation helps the mariner when he needs it most. Now he can better choose his side of the channel during inclement weather and more easily avoid collision with other craft.

New Gulf Marine Gasoline Developed

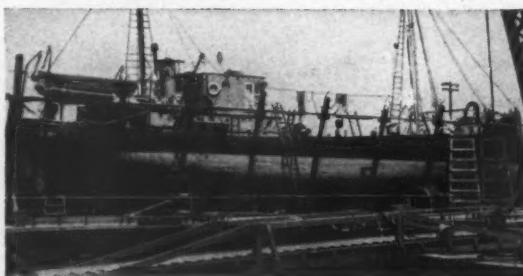
A new higher octane marine gasoline developed by Gulf Oil Corp. is being distributed to replace former lines handled by the manufacturer's marine dealer outlets. To provide added power, the new gasoline has been given an octane rating exceeding Federal requirements for premium gasoline.

Entirely unleaded and undyed this straight run product represents an advanced grade of the previous Gulf Marine White Gasoline, and will be marketed under that name. It is claimed

Rubberized Enamel for Wet Surfaces

A new type of coating incorporating the properties of rubber into a paint which can be brushed or sprayed onto all types of surfaces has been announced by The Wilbur & Williams Co., Greenleaf and Leon Sts., Boston 15, Mass. Rubberized Damp-coat Enamel has a high gloss and is claimed to be resistant to brine, impermeable to water, and applicable to surfaces while they are wet. This is of particular interest to the fishing industry, since it is usually advisable to rinse down a surface with clear fresh water immediately before painting. This product is said to provide a fully sanitary, washable coating and to have the advantage of being non-inflammable after the film has dried. It is available in white, black, aluminum and nine other

Trawler Repairs in the Port of Boston



Bethlehem's two repair yards in Boston harbor, the Atlantic Yard and Simpson Yard, have unexcelled facilities for repairing, reconditioning and servicing trawlers efficiently and economically. The next time you need trawler repairs get in touch with one of these Bethlehem yards.

BETHLEHEM STEEL COMPANY



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PROPELLERS AND FITTINGS
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Diesel or Gas Fishing Boats

Make sure of best
results. SPECIFY
Columbian manga-
nese bronze pro-
pellers
machine ground
pitch, and new metal
bronze fittings —
strong, dependable.
Send for free catalog.

MENHADEN DIESEL
"W. J. Messick"
Reedville, Va.



colors. The manufacturer states, that being formulated on a rubber resin base, this enamel is not affected by continual wetness or complete immersion in water.

Turret Marine Co. Organized

The recently organized Turret Marine Co., Inc., 101 Park Ave., New York 17, N. Y., has taken over the Electronic Division of Paulsen-Webber Cordage Corp. to handle anticipated expanded activities. Products involved in this change are the compact, self-contained Seaguide radio direction finder and the Flagship model which is used extensively on fishing vessels.

Walter H. Bullock, who for many years has been responsible for all technical design and development in the former Electronic Division, now serves in the capacity of chief engineer of Turret Marine, and Fred Paulsen is a director of this new firm. Turret Marine is planning to bring its direction finders into general distribution throughout the United States and foreign countries; dealer franchises now are being arranged.

Improved Hydraulic Remote Control

A new miniature hydraulic remote control, developed and manufactured by Sperry Products, Inc., Hoboken, N. J., has a torque capacity of 50 lb.-in. on the pressure stroke and is rated as much as 50% more powerful than the earlier and slightly heavier Sperry model. Although the new product has numerous applications, its general uses cover throttle, mixture, governor, valve, and position indicator control.

Like the larger Sperry controls, the new version consists of a transmitter and a receiver which form a self-contained, completely enclosed, hydraulic system when joined together by a single line of tubing and filled with oil. Copper tubing or flexible hose makes it possible to install units in any location and to obtain remote control at distances up to 35'.

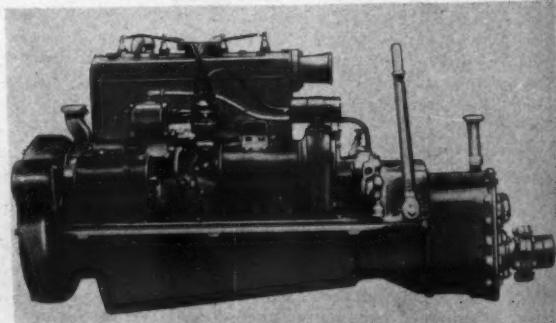
The Sperry Hydraulic Remote Control provides "feel" control of a distant mechanism since any motion of the transmitter arm will be duplicated instantaneously by the receiver arm. Either arm will move through an arc of 60° and the receiver arm may be drilled at any location to obtain the desired linear travel of the actuated rod. The entire system is dust-proof and water-proof.

Universal Refines Engine Features

Universal Motor Co., Oshkosh, Wis., has incorporated several improvements in its 50 hp., 4 cylinder Super-Four marine engine. Now included as standard equipment are a mechanical fuel pump, a magnetic starting switch of the remote control type, a new combination circuit breaker and voltage regulator of the two-step type, and an instrument panel with tachometer, water temperature gauge, oil pressure gauge, ammeter, and ignition and lighting switches.

The Super-Four also has an improved water manifold and better lubrication of valve tappets, valves, and valve guides, as well as a redesigned oil pressure relief mechanism.

The 25 hp., 4 cylinder Universal Utility Four marine engine likewise has been improved. There are new intake and exhaust valves having greater heat resistance, an enlarged reversing gear for smoother operation, new carburetor settings, a redesigned oil pressure relief mechanism, and a six-volt generator



Improved Universal 50 hp. Super-Four marine engine.

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The boat illustrated is one of our 30 fishing vessels on the Atlantic Coast that have installed dependable Hendy Diesel engines in the past year.

Various photos of these boats are appearing in this space from month to month, and this is your cordial invitation to "talk it over" with their owners.

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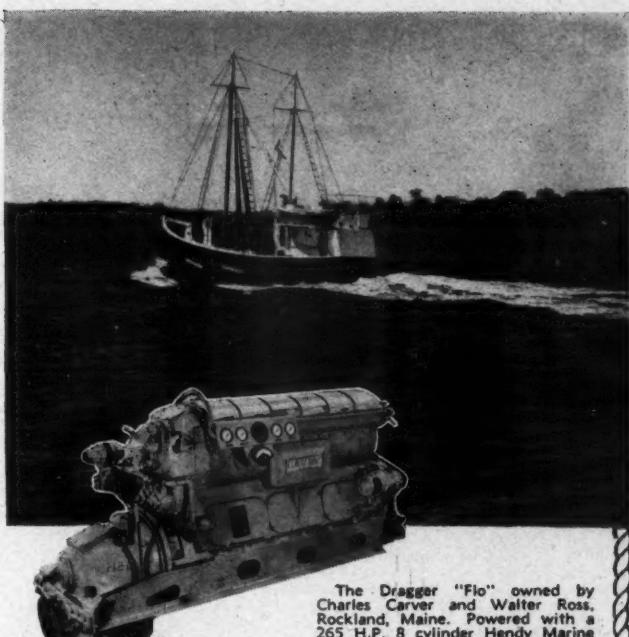
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The Dragger "Flo" owned by Charles Carver and Walter Ross, Rockland, Maine. Powered with a 265 H.P. 8 cylinder Hendy Marine Diesel with 2 to 1 reduction gear.

having improved internal lubrication. Several other new features also are offered as standard equipment. New literature describing these engines is available.

Wolverine Elects Rodman Treasurer

As part of the extensive reorganization undertaken in the past year by Wolverine Motor Works, Inc., Bridgeport, Conn., Perry W. Rodman has been elected treasurer. He will continue his work as sales manager as well as his control duties.

Benjamin's Acquires Shipyard

The site formerly occupied by the Scott McBurney organization has been acquired by Benjamin's for Motors of 130 Clinton St., Brooklyn 2, N. Y. under the name of Mill Basin Ship Repair Co., Inc. Claimed to be one of the largest yards on the East Coast, it is being improved by the addition of new marine railways and elevators accommodating boats up to 75 tons, machine and woodworking shops, and complete facilities for Diesel and gasoline engine overhaul and installation.

Naud Combined Engine Controls

A new type of pilot-house control unit, providing combined operation of both clutch and throttle controls, now is being manufactured by Naud Industries, Seattle.

The new unit consists of single or double levers, for single or twin-engine installations. It is suitable for both gasoline and Diesel power, and can be supplemented by additional control stations of push-button type. Throttle control is mechanical, while clutch operation is by means of an Aer-O-Trol unit in which electricity supplies the starting impulse, but compressed air is used to provide cushioned power for clutch shifting.

With this new model Aer-O-Trol on twin-engine vessels, a few inches of forward motion of the twin control levers engages both clutches and accelerates both engines. In the neutral position, clutches are disengaged and engines slowed to idling speed. It is possible to go from full speed ahead to a full speed astern in one simple motion.

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Vineyard Draggers Find Fish More Plentiful

By J. C. Allen

June draws past and slips over the sky line, with July hull-up to windward as we pen this monthly log. It has been mighty fishy in these bearings, although the luck was not 100% good during the month. Draggers working inshore had wonderful scup and sea bass fishing. True, scup never bring a very high price, but they sold readily during June for the most part.

Yellowtails and butters picked up some, with an average cut of flounders, and, of course, the old stand-bys, cod and haddock. The draggers didn't have much to squawk about as far as fish were concerned.

A couple of draggers operating in just about water enough to get a man wet landed 3 to 6 thousand pounds of cod to a trip during June, with a few halibut, which was rather surprising.

The mackerel struck inshore according to schedule, or a mite ahead of it, and for the first time in our long experience purse seines paid a dividend in Vineyard Sound. Purse seines were used not once, but several times before the schools broke up. There are still plenty of mackerel, but they hang in water too shoal to work a purse seine to advantage.

If there is any flea in the ointment at it stacks up now, it is that there is so cussed much bait that fish won't move much. They feed, settle and sleep, or whatever a fish does when he isn't feeding or making passage. They don't trap well, and they don't take a hook with much enthusiasm. There are any God's amount of striped bass, and somebody gets some, about every 24 hours, but here again, they are dainty.

Probably all hands know by this time that the Massachusetts law on striped bass has been made airtight. Nobody can take 'em in the State with any gear but a hook and line.

First Sword Landed

The first trip of sword to be landed by an Island boat was brought in on June 23 by the *Christine and Dan*, Capt'n Bjarne Larsen, out of Menemsha Creek. This vessel had a catch of fifteen fish, which constituted a good trip, considering the time out and the price received. From this point on, sword will be landed every week, by some of the Island vessels.

"Scuppers" Working on Ledges

Once more the little "scuppers" are on the ledges. This is a peculiar line of endeavor, governed by some mysterious forces that we never have identified. The boats are little, 22 to 26' long, with a fish well to keep the fish alive, and an ice chest, probably an old-fashioned wooden one, to keep the bait fresh.

With one to three men, they fish for scup and sea bass till the tautog run in the Fall, and then go for them. They never seem to fish except when the market is good, and the price is always a cent or two more for live fish anyhow. They use lines that are half, maybe all, copper wire, and fish the tide right through, landing half a ton of live fish at the end of the day.

Dragger "Angeline" Blows Up

An accident that included a brass-bound miracle took place on the eleventh of June, when the dragger *Angeline* out of New Bedford blew up in Menemsha Creek with only slight injuries to Capt. Charlie Forrest and his mate Antone Costa, who were in the fo'c'sle, and insignificant damage to the boat. Both Capt. Forrest and Costa suffered slight burns about the face and head, and the latter had a burned arm, but neither had to be hospitalized. Thirty to forty gallons of gas exploded in the bilge, blowing the dragger's hatches clean up on the dock, and springing her deck up amidships, a matter of inches. The deck settled right back into place though, which was a singular thing.

The accident wasn't due to carelessness, but was just one of those instances where a tank leaked, and a valve failed to cut off tightly, allowing the gas to escape into the bilge. A dozen men from other boats, with extinguishers, put out the fire, and that was the story. Maybe such things wouldn't happen if tanks were rigged on deck, but nobody will agree that this is handy.

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Gloucester Fishing Fleets Receive Annual Blessing

The annual St. Peter's Fiesta, featuring the blessing of the Italian-American fishing fleet, was held at Gloucester June 28-30. The flag-decked vessels were blessed by Archbishop Richard J. Cushing of Boston at the General Seafoods wharf. Other highlights of the program were a colorful parade, an address by Gov. Robert F. Bradford and a seine boat race.

First prize in the race, which consisted of 10 man crews, went to the *Famiglia*, Capt. Sam Linquata; second prize to the *Mary and Joseph*, Capt. Joseph Orlando; and third prize to the *Eleanor*, Capt. Peter Frontiero. A dory race, with two men in each boat, was won by Joseph Randazza and Battista Curcuna.

The Fiesta committee comprised Capt. Benjamin Curcuna, general chairman; Capt. Peter Favazza, Capt. Leonard Linquata and Capt. Sam Favazza.

The third annual blessing of the Portuguese-American fleet took place on June 8 when Archbishop Cushing blessed 27 gaily decorated craft which were tied up five and six deep at the State Fish Pier. Capt. John Carrancho was executive committee chairman; Capt. David Lopes Maranhas, treasurer; and Capt. Manuel P. Domingos, Jr., secretary.

Fish Plant Workers on Strike

Faced with the loss of the major portion of their market because of the seafood workers' strike, owners of Gloucester whiting and redfish driggers have started a stagger system of operation to enable all boats to make at least an occasional trip. Following the start of the strike on June 18, a large part of the fleet has been tied up, although some boats are unloading at other ports.

With only 6 processing firms still operating, production fell off 73 percent during the first 3 weeks of the strike. Nearly one million pounds of fish are said to have spoiled in the holds.

The strike, which involves about 1500 workers in 16 plants, started after one firm laid off 50 employees who allegedly refused to work overtime to handle the large catches which frequently arrive at this time of year. The Union then pressed demands for pay increases under a new contract, and later turned down a compromise offer made by the dealers.

First Swordfish Arrivals

The first swordfish fare at Gloucester this year was landed on July 6 by the *St Teresa*, Capt. Wm. Shields, who had 16 fish that brought 53c per lb. On the previous day, another Gloucester boat, the *Doris F. Amero*, Capt. Nelson Amero, landed 31 fish at Boston that sold for 55c. New Bedford received its first swords on July 5 when the *Clifton*, *Rose Jarvis* and *Santina* landed a total of 10 fish.

Seiners Make Good Catches in Mass. Bay

The Gloucester mackerel seining fleet landed heavily on the mackerel in Massachusetts Bay over the week-end of July 5, when a fleet of 23 seiners brought in 1,304,000 lbs.

Gloucester had 7 trips, totalling 378,000 lbs.; while Boston had 9, totalling 516,000 lbs.; and New Bedford had 7, totalling 410,000 lbs.

Fort Wharf Ice Plant Dedicated

The new plant of the Fort Wharf Ice Co. was formally dedicated on June 24. Located at the foot of Commercial St., the \$600,000 structure is expected to add sufficient ice making capacity in Gloucester to eliminate the possibility of shortages.

The plant, of which John Ryan is president, is 200 ft. long and 110 ft. wide and has a daily ice producing capacity of over 300 tons. There is storage space for 2000 tons, and three boats can be iced up simultaneously at the Company's wharf. The ice making machinery is of Frick manufacture, while ice crushers were furnished by Gifford-Wood.

"Olivia Brown" Repowered

The 85' Gloucester dragger *Olivia Brown*, for which United Fisheries is agent, has been repowered with a 230 hp. Cooper-Bessemer Diesel by Frank L. Sample, Jr., Inc., Boothbay Harbor. She was expected to start swordfishing early this month under command of Capt. John Fragata. New fuel tanks and a steel engine trunk were installed and the hull overhauled.

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The Sounding-Lead

(Continued from page 9)

been increased to 23,906,423 lbs., as compared to 20,380,724 lbs. in 1946.

FISH EXHIBIT—A fish and shellfish display was exhibited by the Educational Section of the Fish and Wildlife Service at the 38th annual convention of the American Home Economics Association, held at St. Louis, Mo., June 23-26. Fish and shellfish were exhibited at their best in a new brushed aluminum case. There were lobsters and scallops from New England; clams and oysters from the Middle Atlantic and Chesapeake States; shrimp and frogs from the Gulf States; whitefish, pike and trout from the Great Lakes region; and halibut and Dungeness crabs from the Pacific. On top of the case there were displayed representative groups of canned and frozen fishery products. The exhibit was arranged in cooperation with the National Fisheries Institute, and W. A. Meletio of the Meletio Seafood Co., St. Louis, supplied the majority of the fish and shellfish.

Literature on the most attractive and appetizing ways to cook and serve fish and shellfish, as developed by Fish and Wildlife home economists, was distributed to the approximately 2,000 persons visiting the exhibit.

F&WS PERSONNEL CHANGES—Reginald Fiedler, former chief of the Fish & Wildlife Service's Division of Commercial Fisheries, has completed his War services and returned to his old job. Andrew W. Anderson, who was chief of the Commercial Fisheries Division during Fiedler's absence, has been transferred to the Service's Alaska Division, and is acting chief in the absence of Seton Thompson, who will spend the fishing season in Alaska. The Alaska Division has been moved back to Washington after about five years in Chicago.

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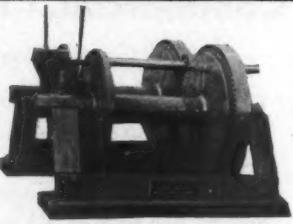
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New Brunswick Designated As Separate Region

By C. A. Dixon

What has for a number of years comprised the Eastern Fisheries Division (Maritime Provinces) recently underwent a radical change and each of the provinces—Nova Scotia, New Brunswick and Prince Edward Island—has been designated as an individual region in immediate charge of a regional supervisor, with each province divided in turn into several unit areas in charge of senior inspectors. According to Fisheries Minister H. F. G. Bridges of Ottawa, who announced the change, more effective handling of regional problems will result from having an officer in charge of each province.

Under the new arrangement, several departmental staff officials were promoted. Included among these was Franklin E. Justason, former district supervisor for southern New Brunswick, who was promoted to the post of assistant chief supervisor for the Maritime Provinces, with headquarters in Halifax, N. S. Mr. Justason conducted a general store and fish curing stand at Crow Harbor from 1919 until he was appointed fishery officer.

E. D. Fraser of Pictou, N. S. succeeds A. L. Barry as chief supervisor for the Maritime Provinces, and the regional supervisors are William McAuley for Nova Scotia, L. H. Parks for New Brunswick, and J. J. Larabee for Prince Edward Island.

In the unit areas of the three provinces, the senior inspectors, Grade I, who have been promoted in New Brunswick, are L. J. Landry of Grand Anse for the counties of Restigouche-Gloucester; T. C. Collette of Newcastle for Northumberland; Bruce Barnes of Moncton for Kent-Albert-Westmoreland; O. A. Rigby of St. Andrews for Saint John-Charlotte; C. E. Kilpatrick of Fredericton, for Kings, Queens, Sunbury, York, Carleton, Victoria and Madawaska (inland counties). A total of eighty-five new inspectors have been added to the force at various points.

Wider Market for Sardine Herring

With the reopening of the Maine sardine canneries in June, a much wider market for sardine herring was made available to southern New Brunswick fishermen. Fair catches were made in the weirs around Deer Island, some 50 hogsheads having been sold at times by individual operators.

The sardine cannery which recently was established at North Head, Grand Manan by the B. H. Wilson Fisheries, Canada, Ltd., a subsidiary of B. H. Wilson Fisheries of Eastport, Me., makes the fourteenth sardine factory now in operation in Southern New Brunswick. A fifteenth plant has been built and will be equipped soon by Rupert Richardson at Richardson, Deer Island. With 15 factories taking fish regularly, Canadian weirmen will have a substantial market for their sardines.

Fish Catch Declines

The total quantity of all fish landed in Southern New Brunswick in the month of May amounted to only 58,950 cwts., with a landed value of \$161,043, as compared to 93,380 cwts., valued at \$308,083 in May of last year. May, 1947 landings showed a decrease of 34,430 cwts., as compared to landings during the same month of 1946.

Sardine Weirs Catching Pollock

Some of the sardine weirs at Deer Island have been taking good catches of pollock for their owners, who consider the big fish a nuisance as they drive sardines from the weirs and disperse the schools. Jackson Bros. of Wilson's Beach recently bought thousands of pollock which they are reported to be curing for southern markets.

Campobello, N. B. line and trawl fishermen were making fairly good catches as June faded from the picture, but prices were very unsatisfactory.

Appropriation for Fishing Industry

Fisheries Minister Bridges has earmarked the sum of \$8,000,000 to aid the fishing industry. These funds presumably will be used to maintain a reasonable price level for fish.

Texas Oyster Grounds

(Continued from page 18)

see all our plantings from the laboratory windows, thus reducing the danger of unauthorized oystering. Second was the closeness of the seed beds in Copano Bay. These Copano oysters are of poor quality, thin, dwarfed, and the meats are frequently discolored and almost always heavily infested with *Nematopsis*, the mantles, gills, blood vessels and even the water tubes of the gills being full of cysts and single spores.

In spite of such infestation oysters transplanted from Copano to Aransas Bay showed a remarkable recovery. Several weeks after planting the meats were firmer, whiter and contained more glycogen, while there was a noticeable increase in the size of the shells. So far (five months after planting) they are doing well, and barring storms or other acts of God, there seems little reason to apprehend any more than normal loss.

Cooperative Reseeding

One thing that we are trying, however, is a considerable departure from accepted methods of rehabilitation. This is the salvaging of seed oysters from the shucking houses.

In Texas it is the custom for oystermen delivering oysters to the shucking houses to be paid by the number of gallons shucked from the load, rather than by the number of bushels entering the plant. The result is that the shell piles around the shucking plants present a shocking and depressing sight, for nearly every one of the shells opened by the shuckers has from 2 to 10 seed oysters about one inch long attached to it. At a conservative estimate, the houses destroy, at this rate, five young oysters for every one of marketable size that they open, for the custom has been for years to allow the coastal counties to utilize this shell for road building, and at times the stench of rotting oysters along a new road was almost insupportable.

At the beginning of this year, in the Rockport area, the State laboratory instituted a new method of handling this shell. Almost every barrel of it was returned to the water within 48 hours and planted on suitable ground, with the result that most of this seed was saved, and at the present writing is growing and doing well, although there was some mortality in sizes less than 1 inch. Eleven thousand barrels of this seed, of 8100 cubic inches capacity, were planted at a cost of 15¢ per barrel.

It is our hope that by experimental plantings such as these we can work out the problems that are too expensive for the ordinary oystermen, and induce them to begin sowing in order that they may reap, for if they do not the Texas oyster industry is doomed.

At the same time we are not neglecting other things. An effort is being made to revise our leasing laws so that we can lease denuded reefs for planting, and in the Galveston Bay area, much work is being done on pollution control. Moreover, we now have under construction a modern marine laboratory at Rockport.

To quote from Dr. Galtsoff, who was a recent visitor, "The construction of a new State fisheries laboratory at Rockport will give the State biologists an opportunity for a more critical study of various fishery problems of the State. Undoubtedly, the new center of research will have great educational influence on fishermen. Conservation of natural fishery resources is impossible without the understanding of its aim by the fishermen and without their active cooperation."

"It is hoped that a good plan started by the State in showing the oystermen how to grow more and better oysters will bring results and that local oyster dealers will gradually come to realize that their business is doomed unless effective steps

are made to stop wasteful practices. By leasing from the State oyster bottoms suitable for cultivation and by returning to them the seed which is at present destroyed, substantial oyster resources can be built and the oyster industry of the State may be placed on a sound basis.

"The State Game, Fish and Oyster Commission can be of great help in the rehabilitation of oyster resources by providing, through its technical staff and its laboratory, information and advice, and by establishing demonstration oyster farms. This type of activity seems to be very promising. It is believed that it may substantially contribute to the rehabilitation and conservation of oyster resources of the State."



Guaranteed Performance

Is a fact and not fiction when your boat is powered with a LATHROP MARINE ENGINE. Skilled engineers and skillful manufacturing methods insure correct design . . . elimination of unnecessary weight . . . attractive price. Severe salt water field tests under all conditions guarantee dependable marine power with low fuel consumption at all times.

For further information on LATHROP MARINE ENGINES — Diesel or Gasoline — write to Dept. S.



Where-to-Buy Directory

Companies whose names are starred (*) have display advertisements in this issue; see Index to Advertisers for page numbers.

ALARM SIGNALS

Clark Cooper Co., 319 N. Market St., Palmyra, N. J.

ANCHORS

*R. S. Danforth, 2121 Aliston Way, Berkeley, Calif.

ANCHOR-GRAPNELS

*Chas. D. Briddell, Inc., Crisfield, Md.

BATTERIES, STORAGE

"Exide": Electric Storage Battery Co., Allegheny Ave. and 19th St., Philadelphia, Pa.
Willard Storage Battery Co., Cleveland, Ohio

CAN MANUFACTURERS

Continental Can Co., 100 E. 42nd St., New York, N. Y.

CLAM KNIVES, TONGS, RAKES

*Chas. D. Briddell, Inc., Crisfield, Md.

CLUTCHES

Kinney Manufacturing Co., 5341 Washington St., Boston, Mass.

COLD STORAGES

Quaker City Cold Storage Co., Philadelphia, Pa.

COMPASSES

*Kelvin-White Co., 90 State St., Boston, Mass.

CORDAGE MANUFACTURERS

American Manufacturing Co., Noble and West Sta., Brooklyn, N. Y.

*Columbian Rope Co., Auburn, N. Y.

*New Bedford Cordage Co., 233 Broadway, New York, N. Y.

DEPTH FINDERS

*Aero-Marine Laboratory, Foster Field, Stonington, Conn.

Bendix Aviation Corp., Pacific Div., 7551 Melrose Ave., Hollywood 46, Calif.

*Bludworth Marine, 100 Gold St., New York 7, N. Y.

*Submarine Signal Co., 160 State St., Boston, Mass.

DIESEL AUXILIARY SETS

Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W. Outer Drive, Detroit 23, Michigan.

*R. H. Sheppard Co., 330 Middle St., Hanover, Pa.

United States Motors Corp., 448 Nebraska St., Oshkosh, Wis.

DISTRESS SIGNALS

*Aerial Products, Inc., Merrick, L. I., N. Y.

ELECTRICAL EQUIPMENT

Electro Dynamic Works, Bayonne, N. J.
General Electric Co., Schenectady, N. Y.

*Motor Ignition Co., 1526 Fairmount Ave., Philadelphia 30, Pa.

Sperry Gyroscope Co., Inc., Great Neck, N. Y.

ELECTROLYSIS ELIMINATION

Hamilton Engineering Co., P.O. Box 1893, Boston, Mass.

ENGINE MANUFACTURERS

Atlas Imperial Diesel Engine Co., 115 Broad St., New York, N. Y.

*The Buda Co., Harvey, Ill.

*Caterpillar Tractor Co., Peoria, Ill.

*Chrysler Corporation, 12211 East Jefferson, Detroit, Michigan.

*Cooper-Bessemer Corp., Mount Vernon, O.

*Cummins Engine Co., Columbus, Ind.

Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W. Outer Drive, Detroit 23, Michigan.

Enterprise Engine & Foundry Co., 18th and Florida Sts., San Francisco 10, Calif.

Fairbanks, Morse & Co., Chicago, Ill.

*Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.

Kermath Mfg. Co., 5896 Commonwealth Ave., Detroit 8, Mich.

*The Lothrop Engine Co., Mystic, Conn.

Lorimer Diesel Engine Co., 16th & Wood Sts., Oakland, Calif.

Mack Mfg. Corp., Empire State Building, New York 1, N. Y.

*Murphy Diesel Co., 5317 West Burnham St., Milwaukee, Wis.

Murray & Tregurtha, Inc., 12 Hancock St., Quincy 71, Mass.

The National Supply Co., Superior Diesels, Springfield, Ohio.

*Nordberg Mfg. Co., Milwaukee, Wis.

*Oscos Motors Corp., 2020 E. Orleans St., Philadelphia 34, Pa.

Palmer Bros. Engines, Inc., Cos Cob, Conn.

Red Wing Motor Co., Red Wing, Minnesota

*Wolverine Motor Works Inc., 1 Union Ave., Bridgeport, Conn.

Worthington Pump & Machinery Corp., 421 Worthington Ave., Harrison, N. J.

Ford Conversions and Parts

*Oscos Motors Corp., 3648A No. Lawrence St., Philadelphia, Pa.

Gasoline Engines

*Ford Motor Co., 3559 Schaefer Road, Dearborn, Mich.

*Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.

*Nordberg Mfg. Co., Milwaukee, Wis.

ENGINE DEALERS

Benjamin's for Motors, 130 Clinton St., Brooklyn 2, N. Y.

*The Edson Corp., 49 D St., South Boston, Mass.

Harbor Supply Oil Co., 39 Portland Pier, Portland, Me.

Walter H. Moreton Corp., 9 Commercial Ave., Cambridge, Mass.

*H. O. Penn Machinery Co., Inc., East River and 140th St., New York, N. Y.

*Perkins-Eaton Machinery Co., 376 Dorchester Ave., South Boston 27, Mass.

*Southworth Machine Co., 30 Warren Ave., Portland, Me.

*United Dock Corp., City Island, New York 64, N. Y.

*J. H. Westerbeke Corp., 280 Northern Ave., Boston 10, Mass.

EXHAUST SILENCERS

John T. Love Welding Co., Walen's Wharf, Wharf St., Gloucester, Mass.

FISHING GEAR

*Westerbeke Fishing Gear Co., Inc., 279 Northern Ave., Boston, Mass.

FISH MEAL MACHINERY

*Enterprise Engine & Foundry Co., Process Machinery Div., 18th and Florida Sts., San Francisco, Calif.

FISH SCALERS

Portable, Flexible Shaft
N. A. Strand & Co., 5001 N. Wolcott Ave., Chicago, Ill.

FLOATS

New England Trawler Equipment Co., 301 Eastern Ave., Chelsea, Mass.

J. H. Shepherd Son & Co., 1820 East Ave., Elyria, Ohio.

FOG HORNS

Clark Cooper Co., 319 N. Market St., Palmyra, N. J.

L. D. Lothrop Sons, Gloucester, Mass.

FUEL GAUGES

The Liquidometer Corp., Marine Division, Skillman Ave. at 37th St., Long Island City, N. Y.

HOOKS, FISH

*Bill DeWitt Baits, Hook Mfrs., Auburn, N. Y.

*O. Mustad & Son, Oslo, Norway.

**Pflueger": Enterprise Mfg. Co., 110 Union St., Akron, Ohio

ICE BREAKERS

Gifford-Wood, Hudson, N. Y.

*Link-Belt Co., 2410 W. 18th St., Chicago 8, Ill.

ICE PICKS

*Chas. D. Briddell, Inc., Crisfield, Md.

MARINE GLUE

W. A. Briggs Bitumen Co., 3309 Richmond St., Philadelphia 34, Pa.

NETS AND NETTING

W. A. Augar, Inc., 35 Fulton St., New York, N. Y.

*R. J. Ederer Co., 540 Orleans St., Chicago, Ill.

The Fish Net & Twine Company, 310-312 Bergen Ave., Jersey City, N. J.

*The Linen Thread Co., Inc., 105 Maplewood Ave., Gloucester, Mass.

New England Trawler Equipment Co., 301 Eastern Ave., Chelsea, Mass.

A. M. Starr Net Co., East Hampton, Conn.

OILED CLOTHING

*H. M. Sawyer & Son Co., East Cambridge, Mass.

OIL FILTERS

Hamilton Engineering Co., P.O. Box 1893, Boston, Mass.

Winslow Engineering Co., 4069 Hollis St., Oakland 8, Calif.

OILS

Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.

*Standard Oil Co. of N. J., 26 Broadway, New York 4, N. Y.

OYSTER KNIVES, TONGS

*Chas. D. Briddell, Inc., Crisfield, Md.

PRESERVATIVES

**Cuprolignum": Robert S. Chase, 195 Marlborough St., Boston 16, Mass. Megary & Co., 16 E. Lexington St., Baltimore 2, Md.

Unexcelled Chemical Corp., 11 Park Place, New York 7, N. Y.

PAINTS

*International Paint Co., Inc., 21 West St., New York, N. Y.

Pettit Paint Co., Belleville, N. J.

PROPELLERS

*Columbian Bronze Corp., Freeport, N. Y.

*Michigan Wheel Co., Grand Rapids, Mich.

*Hyde Windlass Co., Bath, Me.

PROPELLER SHAFTS

*The International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.

PUMPS

*The Edson Corp., 49 D Street, South Boston, Mass.

Marine Products Co., 6636 Charlevoix Ave., Detroit 7, Mich.

Oberdorfer Foundries, Inc., Marine Pump Division, Syracuse, N. Y.

RADIO DIRECTION FINDERS

*Aero-Marine Laboratory, Foster Field, Stonington, Conn.

*Bludworth Marine, 100 Gold St., New York 7, N. Y.

Fisher Research Laboratory, Inc., Palo Alto, Calif.

Jefferson-Travis, Inc., 380 Second Ave., New York 10, N. Y.

*Kaar Engineering Co., 611-619 Emerson St., Palo Alto, Calif.

Madison Engineering Co., 14 Pearl St., New York 4, N. Y.

*Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

Sargent, Lord & Co., 42 Portland Pier, Portland, Me.

*Submarine Signal Co., 160 State St., Boston, Mass.

RADIO RECEIVERS

Soundview Marine Co., Inc., 267 City Island Ave., City Island, N. Y.
Superior Radio Co., 123 Barclay St., New York, N. Y.

RADIO TELEPHONES

*Aero-Marine Laboratory, Foster Field, Stonington, Conn.
Fisher Research Laboratory, Inc., Palo Alto, Calif.
Harvey-Wells Electronics, Inc., Southbridge, Mass.
*Hudson American Corp., 26 West 43rd St., New York 18, N. Y.
Jefferson-Travis Inc., 380 Second Ave., New York 10, N. Y.
Kaar Engineering Co., 611-619 Emerson St., Palo Alto, Calif.
Radiophone Corp., Los Angeles 15, Calif.
Radiation Products, Inc., Dept. 20, 1142 Wall St., Los Angeles 15, Calif.
*Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Sargent, Lord & Co., 42 Portland Pier, Portland, Me.
Superior Radio Co., 123 Barclay St., New York, N. Y.

RANGES

*"Shipmate": Stamford Foundry Co., Stamford, Conn.

Elisha Webb & Son Co., 135 So. Front St., Philadelphia 6, Pa.

REVERSE AND REDUCTION GEARS

*Snow-Nabstedt Gear Corp., Welden St., Hamden, Conn.

*Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.

G. Walter Machine Co., 84 Cambridge Ave., Jersey City, N. J.

RUBBER BOOTS

U. S. Rubber Co., 1230 Sixth Ave., New York 20, N. Y.

RUBBER CLOTHING

H. M. Sawyer & Son Co., East Cambridge, Mass.

U. S. Rubber Co., 1230 Sixth Ave., New York 20, N. Y.

SEAFOOD TOOLS

*Chas. D. Bridgell, Inc., Crisfield, Md.

SHIPBUILDERS, BOATYARDS

*Avondale Marine Ways, Inc., Westwego, La.

Bethlehem Steel Co., Shipbuilding Division, Bethlehem, Pa.

Bristol Yacht Building Co., South Bristol, Me.

*Camden Shipbuilding & Marine Railway Co., Camden, Me.

*Delaware Bay Shipbuilding Co., Inc., Leesburg, N. J.

*Electric Boat Co., Groton, Conn.

Goudy and Stevens, East Boothbay, Me.

*Liberty Dry Dock, Inc., Foot of Quay St., Brooklyn 22, N. Y.

Frank L. Sample, Jr., Inc., Boothbay Harbor, Me.

Stonington Boat Works, Stonington, Conn.

*Sturgeon Bay Shipbuilding & Dry Dock Co., Sturgeon Bay, Wis.

Welin Davit & Boat Co., Perth Amboy, N. J.

STEERING GEAR

*The Edson Corp., 49-51 D St., South Boston, Mass.

Kirsch Pipe Co., 2925 Western Ave., Seattle 1, Wash.

Sperry Gyroscope Co., Inc., Great Neck, N. Y.

STERN BEARINGS

Arguto Oilless Bearing Co., Philadelphia 44, Pa.

"Goodrich Cutless": Lucian Q. Moffitt, Inc., Akron 8, Ohio.

*Hathaway Machinery Co., New Bedford, Mass.

TRAWLING EQUIPMENT

Bromfield Mfg. Co., Inc., 246-256 Border St., East Boston 28, Mass.

*Hathaway Machinery Co., New Bedford, Mass.

New England Trawler Equipment Co., 301 Eastern Ave., Chelsea, Mass.

WIRE ROPE

*Bethlehem Steel Co., Bethlehem, Pa.

Fish Lines

Tarpon Springs, Fla. became the sponge center of the world by an incident of war. During the Spanish-American war the small sponge fleet that berthed at Key West put in to Tarpon Springs to dispose of their cargo, as they feared capture by Spanish warships said to be raiding their area. The sponge fishermen liked Tarpon Springs and remained there. From this modest beginning there has developed the Tarpon Springs Sponge Exchange, the largest sponge market in the world.

Edible Fish

Considering all edible varieties of fish in the United States, it is possible to serve a different kind every day for five and one-third months without repeating a single dish.

Four-Clawed Lobster

Capt. Charles R. Grinnell of Woods Hole, Mass., lobsterman for nearly 60 years and owner and operator of the 24' lobster boat *R.J.*, recently caught a lobster having three left claws as well as a normal right claw. Capt. Grinnell, who regularly tends nearly 300 lobster pots in Vineyard Sound and is Falmouth's harbormaster, said the lobster was the first four-clawed one ever taken, as far as he knew. The three claws emanate from a single, apparently normal "elbow" of the crustacean, and somewhat resemble small branches on a tree.

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Cod Resource

A single large cod may produce as many as 10,000,000 eggs in one year.

The cod resource, perhaps the largest of the North American banks, yields a billion pounds of fish a year to fishermen of the United States, Canada and Newfoundland.

Wrong Cure

Oyster fishermen, who hate starfish because they destroy oyster beds, once made a practice of tearing to pieces and throwing into the sea every starfish caught. Thus, unwittingly, they increased the starfish population, for it is claimed that each arm developed into a new individual.

Shrimps Popular

Shrimps are the most popular crustacean in the United States, it is reported. Americans eat 10 times as much shrimp as lobster and half again as much as they do crabmeat.

The South Atlantic and Gulf States are the seat of the largest shrimp fishery in the world.

Fishy Eyed

The lens of the eye of a fish is round like a marble, and not flexible as in human eyes. The fish's eye focuses by movement of the lens forward and backward.

American Lobsters

American lobsters are the third most valuable marine resource in New England.

Lobsters are caught anywhere from directly off coast to 150 miles away from the shoreline.

SELECTED QUALITY*Caught by Our Own Boats**No order too large or too small, from a carton to a carload*

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Main Office: 231 So. Front St., Philadelphia, Pa.

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Closing date, 25th of month preceding date of issue.

QUICK SALE BARGAINS

110 hp. Kermath Sea Mate, direct drive, new '36, run only 3 short Summer seasons in pleasure boat, \$400. 80 hp. Bud, Model HM 298, rebuilt, used only in fresh water, \$550. 4 cyl. Buffalo, 40 hp. Navy rebuilt and not used since, \$250. 130 hp. Chris Craft, new '39 rebuilt, 3:1 reduction gear, used three short Summer seasons, \$400. 4-44 Gray, like new, \$225. All the above are guaranteed—prices f.o.b. on skids. New Kermath 91 hp. Sea Chief Special with Upton 2:1 reduction gear, \$795. New Gray Lugger 4 with 2:1 reduction gear, some extras, \$750. Write us as to your requirements, as we have large listings of fish boats, work boats, draggers, party boats, etc. at the right price. Knox Marine Exchange, Camden, Me.

HULL FOR SALE

For sale, 48' hull partly decked, with shafts, suitable for charter, commercial fishing, ferry or yacht. Price reasonable. E. W. Dutton, Chatham, Mass.

ENGINE FOR SALE

For sale, 3 cylinder, 30 hp. heavy duty Palmer marine engine, guaranteed first-class condition, with new Bosche magneto costing \$65 included in total price, which is reasonable. Interested party please contact A. MacTaggart, 108 Lenox Ave., Devon, Conn.

FOR SALE

75' x 16' all steel steam tug, 14" x 16" engine, Scotch boiler, 160 lbs. steam pressure, 110 volt light plant, steam steering gear, all in A-1 condition, can sail any place on Great Lakes.

Hull suitable for Diesel power and towing, also various bronze propellers, 18" to 24" diameter. Reger & Werner Fish Co., E. 9th St., Lorain, Ohio.

DRAGGER FOR SALE

Fifty foot dragger *Eva M. Martin*, 90 to 110 Gray Diesel engine, has 3-year-old winch. Boat is well equipped with nets and doors, electric generator, two sets of batteries and a telephone receiving set. Asking \$10,000. Please get in touch with Ignazio Ragusa, 301 North St., Boston, Mass. Telephone Bowdoin 4733.

MARINE DIESEL SALESMAN WANTED

Wanted—marine Diesel engine salesman, experienced in propulsion and auxiliaries for commercial vessels up to 600 hp. Good deal for right man. Write Box 17, Atlantic Fisherman, Goffstown, N. H., giving complete data and background. All replies confidential.

OLD COPIES OF MAGAZINE WANTED

In order to complete our files, we need the following issues of Atlantic Fisherman: April 1923, June 1923, September 1923, June 1924, September 1924, February 1927, August 1928. We will pay \$1 per copy for any of these issues. Send to Atlantic Fisherman, Goffstown, N. H.

ENGINE GEAR

Joe's marine reverse and/or 2:1 reduction gear for Ford V8. New. Immediate shipment. Harry Baxter, 7819 Argus Rd., Phila. 19, Pa.

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Beyer Fish Co., Fulton Fish Market
International Fish Co., 111 Fulton Fish Market
Lester & Toner, Inc., Fulton Fish Market
South Fish Co., 31 Fulton Fish Market
Frank W. Wilkisson, Inc., 16 Fulton Market

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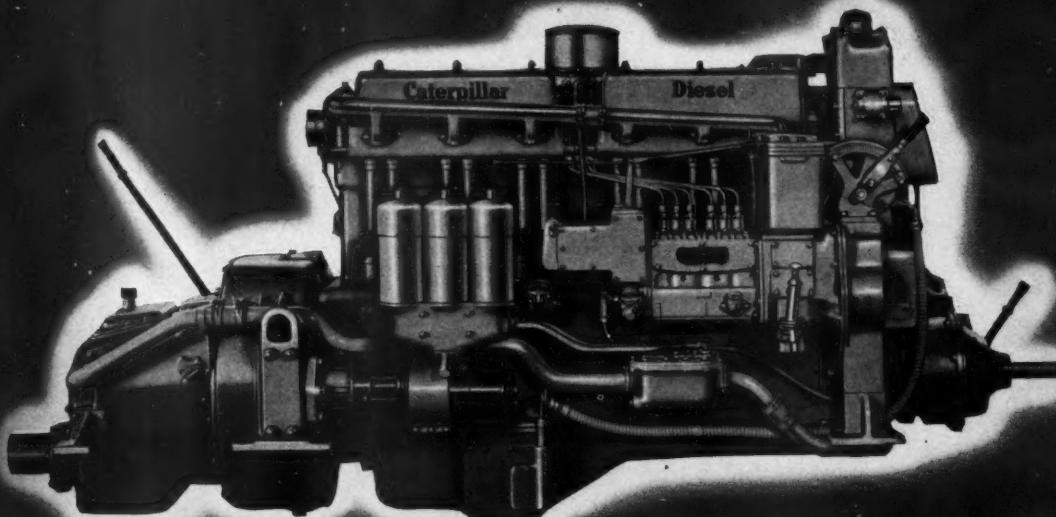
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The engine



THAT "HAS EVERYTHING"

POWER

All the power, *all the time*, that its conservative rating says it has.

STRENGTH and DURABILITY

The ability and ruggedness to fight rough weather and pounding sea.

DEPENDABILITY

Performance you can rely on to "take you out and bring you back."

ECONOMY

Fuel, lubrication, servicing, maintenance and long-life economies that add substantially to your profits.

DEALER SERVICE

Replacement parts, inspection and expert mechanical service where you want them and when you want them.

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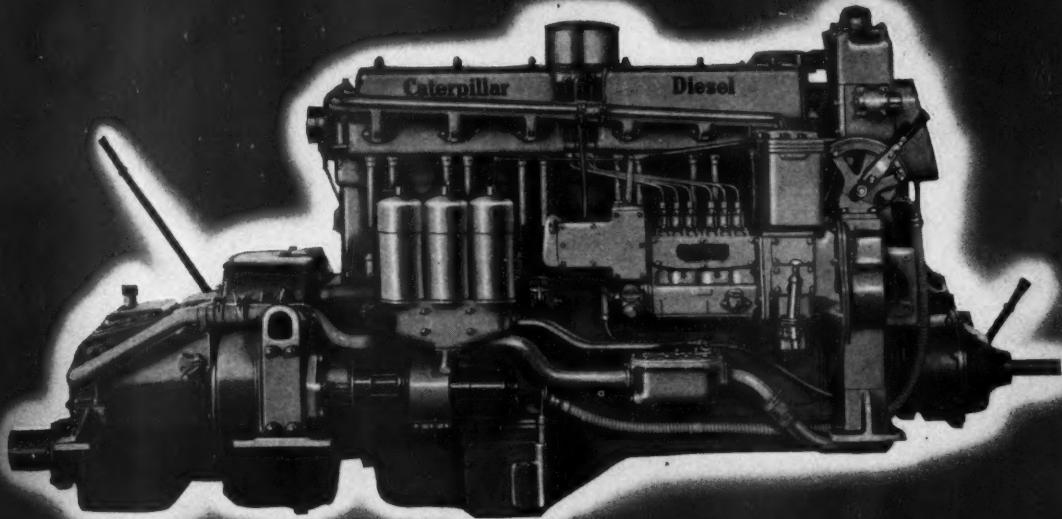
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The engine



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POWER

All the power, *all the time*, that its conservative rating says it has.

STRENGTH and DURABILITY

The ability and ruggedness to fight rough weather and pounding sea.

DEPENDABILITY

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Fuel, lubrication, servicing, maintenance and long-life economies that add substantially to your profits.

DEALER SERVICE

Replacement parts, inspection and expert mechanical service where you want them and when you want them.

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Full Power

to do a better job

A NEW Cooper-Bessemer Diesel now gives the 2-year-old "Joseph & Lucia" more power . . . full power to do a better job than ever before.

Since a Cooper-Bessemer had given Captain Giuseppe Brancaleone excellent performance in his former vessel, he wanted one of these reliable Diesels from the very first, but delivery had to wait due to war conditions.

Replacing a 250 hp engine, the new 350 hp Cooper-Bessemer will provide the power, speed, dependability and overall efficiency that are so vitally important to profitable fishing.

If you are thinking of repowering or if you're planning a new vessel, get in touch with Cooper-Bessemer about the ideal, long-lasting Diesel for your particular needs.



Cooper-Bessemer 350
hp Type GS-8 direct
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the 95' Essex-built
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